FLORIDA® WILDLIFE

March—April 1985

FLORIDA'S RECORD FISH CATCHES THROUGH FEBRUARY 1985

SPECIES		WEIGHT POUNDS-OUNCES	ANGLER AND WHERE CAUGHT
largemouth bass *Micropterus salmoides*		20—2	Frederick Joseph "Fritz" Friebel, Big Fish Lake, a private pond in Pasco County, May 1923.
redeye bass *Micropterus coosae*	CERTIFIED	7—0	J.T. Reynolds, Apalachicola River, Gadsden County, June 1982.
spotted bass *Micropterus punctulatus*	CERTIFIED	3—7	Ronald Bundy, Apalachicola River, Gadsden County, August 1981.
striped bass *Morone saxatilis*	CERTIFIED	38—9	Justin McAlpin, Lake Seminole, Gadsden County, November 1979.
sunshine bass (A hybrid between the white bass and the striped bass)	CERTIFIED	15—8	Horace Lee Price Jr., Apalachicola River, Gadsden County, June, 1984.
Suwannee bass *Micropterus notius*	CERTIFIED	3—9¾	William H. Henry, Suwannee River, Dixie County, February, 1985.
white bass *Morone chrysops*	CERTIFIED	4—11	Richard S. Davis, Apalachicola River, Gadsden County, April 1982.
black crappie (speckled perch) *Pomoxis nigromaculatus*		3—12	John McGilvray, Newnans Lake, Alachua County, December 1964.
bluegill *Lepomis macrochirus*	CERTIFIED	2—12	Don V. Flannery, private pond, Hillsborough County, April 1978.
flier *Centrarchus macropterus*	CERTIFIED	1—0	Butch Taylor, private pond, Leon County, April 1981.
redbreasted sunfish *Lepomis auritus*	CERTIFIED	1—12¾	Alvin Buchannan, Suwannee River, Dixie County, May 1984.
redear sunfish (shellcracker) *Lepomis microlophus*	CERTIFIED	4—2	Larry Gates, Merritt's Mill Pond, Jackson County, April 1982.
spotted sunfish (stumpknocker) *Lepomis punctatus*	CERTIFIED	13¼ ounces	Coy Dotson, Suwannee River, Columbia County, May 1984.
warmouth sunfish (warmouth perch) *Lepomis gulosus*	CERTIFIED	1—9	Bill Rasmussen Jr., Roberts Pond, Okaloosa County (Eglin Air Force Base), May, 1981.
channel catfish *Ictalurus punctatus*	CERTIFIED	43—0	Mike Davis, Haines Creek, Lake County, April 1980.
white catfish *Ictalurus catus*	CERTIFIED	16—12	Shawn James Williams, Caloosahatchee River, Lee County, April 1984.
chain pickerel *Esox niger*		8—0	Jimmy James, Lake Talquin, Gadsden County, July 1971.
bowfin (mudfish) *Amia calva*	CERTIFIED	19—0	Jim Brown, Lake Kissimmee, Osceola County, November 1984.
carp *Cyprinus carpio*	CERTIFIED	40—9	Bernard L. Rowan, Apalachicola River, Gadsden County, May 1981.
longnose gar *Lepisosteus osseus*	CERTIFIED	32¼ pounds	Evan D. Merritt, Lake Panasoffkee, Sumter County, July 1981.
American shad *Alosa sapidissima*	CERTIFIED	4—10	Phil Chapman, St. John's River, Seminole County, February, 1985

The following species have not yet had a catch reported that is a state record. The weights shown are minimum weights to qualify for a Florida record:

redfin pickerel *Esox americanus*	¾ pound
alligator gar *Atractosteus spatula*	70 pounds
Florida gar *Lepisosteus platyrhincus*	5 pounds

FLORIDA® WILDLIFE

Dedicated to the appreciation and enjoyment of our wildlife heritage, and to a fuller understanding of efforts directed toward the protection, restoration, enhancement and wise use of our natural resources.

Florida Game & Fresh Water Fish Commission
Publisher

Volume 39, No. 2

March-April 1985

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THE COVERS

Our front cover, by James C. Greene, shows a raccoon as it seeks food such as crayfish near the water's edge. Our back cover, from a painting by John Roberge, shows a turkey hen and chick. See page 10 for a story about turkeys and quail.

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HOW TO SUBMIT

Contributors should write the Editor and request "How to Submit" before sending contributions. The Commission assumes no responsibility for unsolicited manuscripts and illustrative materials.

What'd You Catch?

Art by Wallace Hughes

With Additional Art by John Roberge

You don't have to beat the state record to have your big fish recognized in our freshwater fish certification program. You can be recognized by catching any fish in the program which meets or exceeds the minimum qualifying weights shown here.

There are 24 different freshwater fish eligible for recognition as large catch or state records in Florida, so every angler has a fair chance. These 24 species are identified here with drawings which show some of the characteristics looked at by our fisheries biologists when they certify an application for recognition.

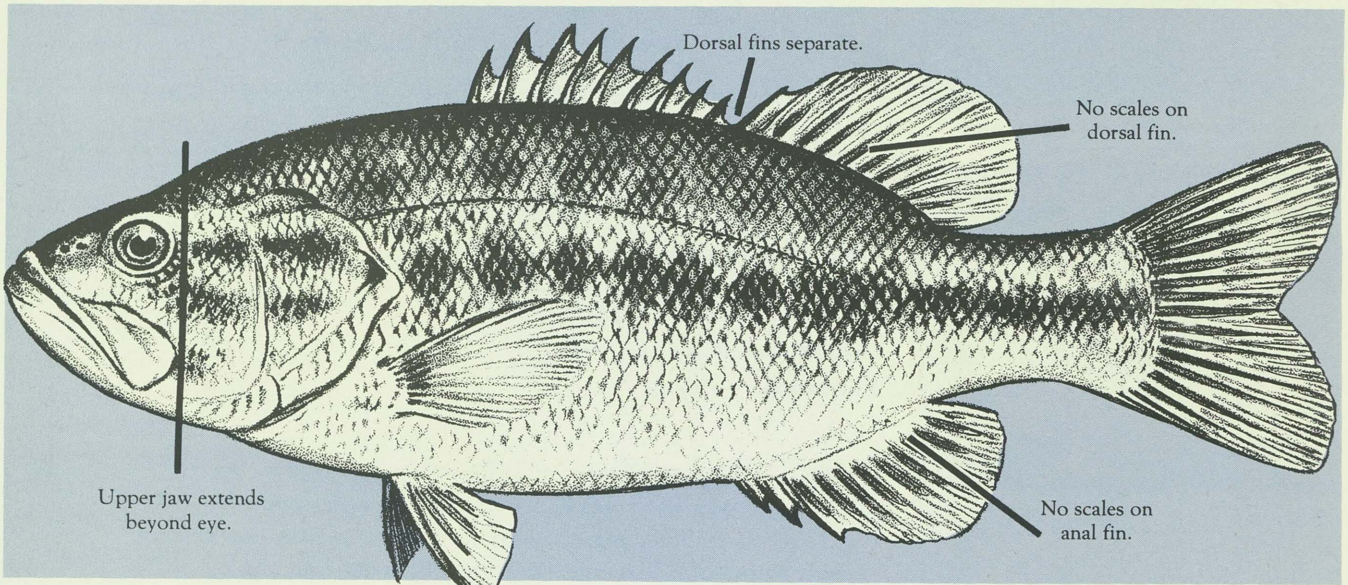
Color is not a very reliable characteristic for identifying fish because it can vary, even within a species. A fish's colors can also change from dark to light, depending on the habitat in which it lives. Some species are more brilliantly colored during the spawning season.

If you catch a fish which meets or exceeds the minimum weights shown here for that species, and you would like to have the catch certified, call your nearest Commission office. See the front pages of your telephone directory for the number.

BASS

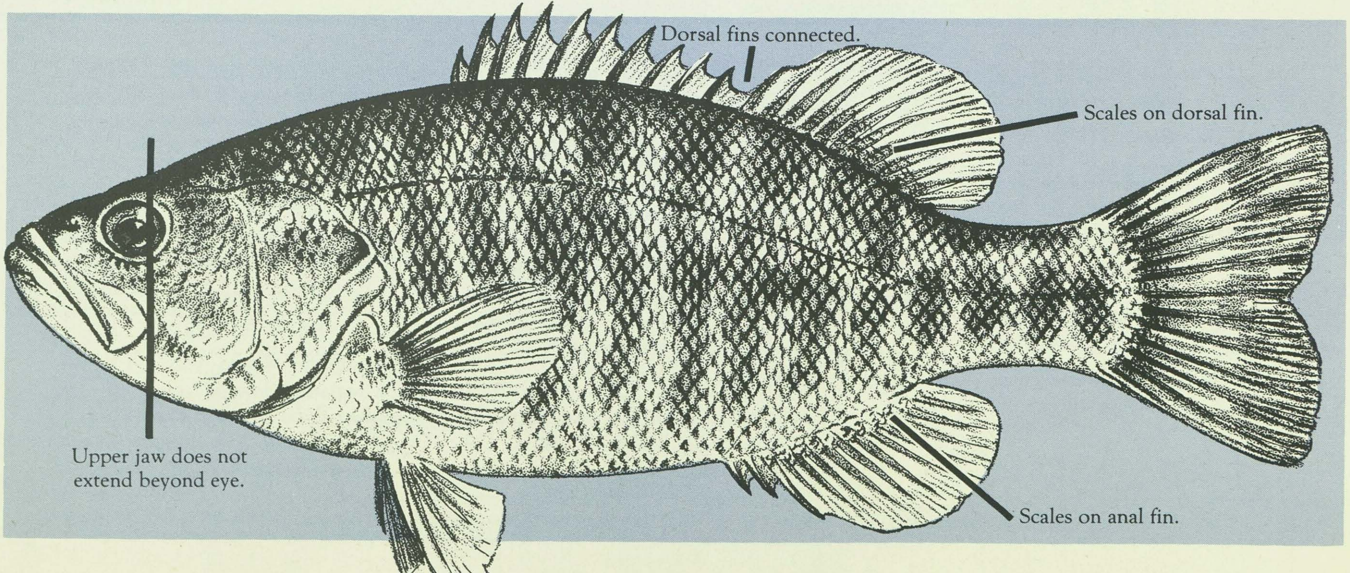
LARGEMOUTH BASS *Micropterus salmoides*

Minimum qualifying weight 14 pounds


Dorsal fins separate.
No scales on dorsal fin.
Upper jaw extends beyond eye.
No scales on anal fin.

SUWANNEE BASS *Micropterus notius*

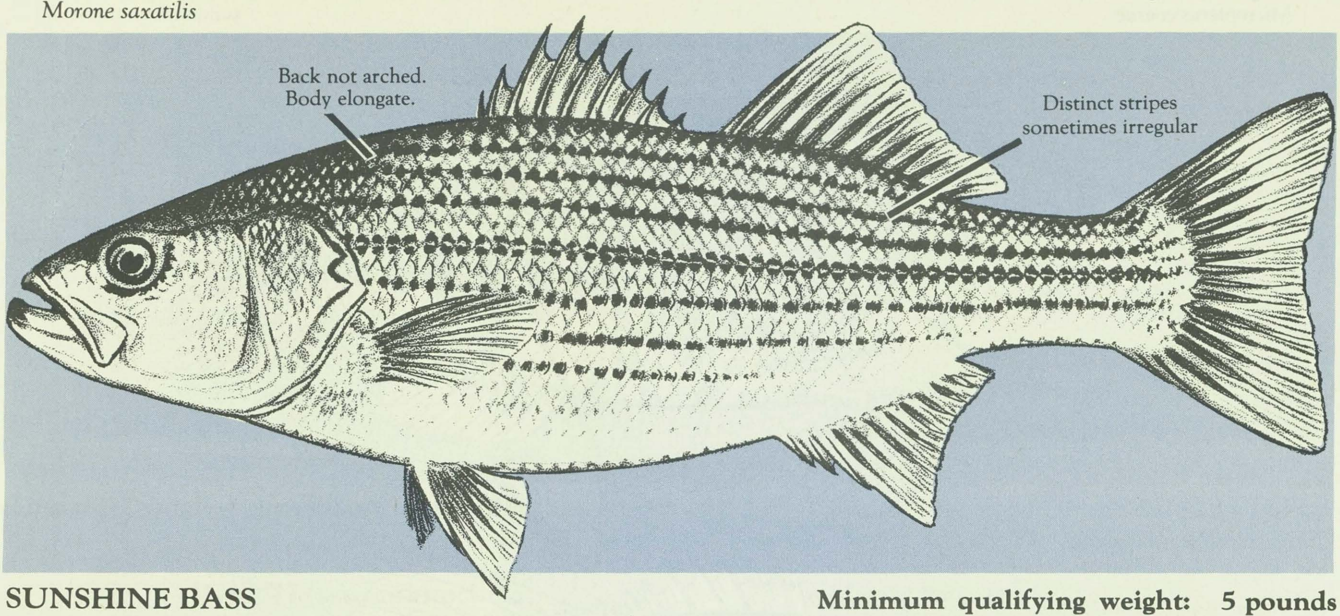
Minimum qualifying weight: 3 pounds


Dorsal fins connected.
Scales on dorsal fin.
Upper jaw does not extend beyond eye.
Scales on anal fin.

BASS

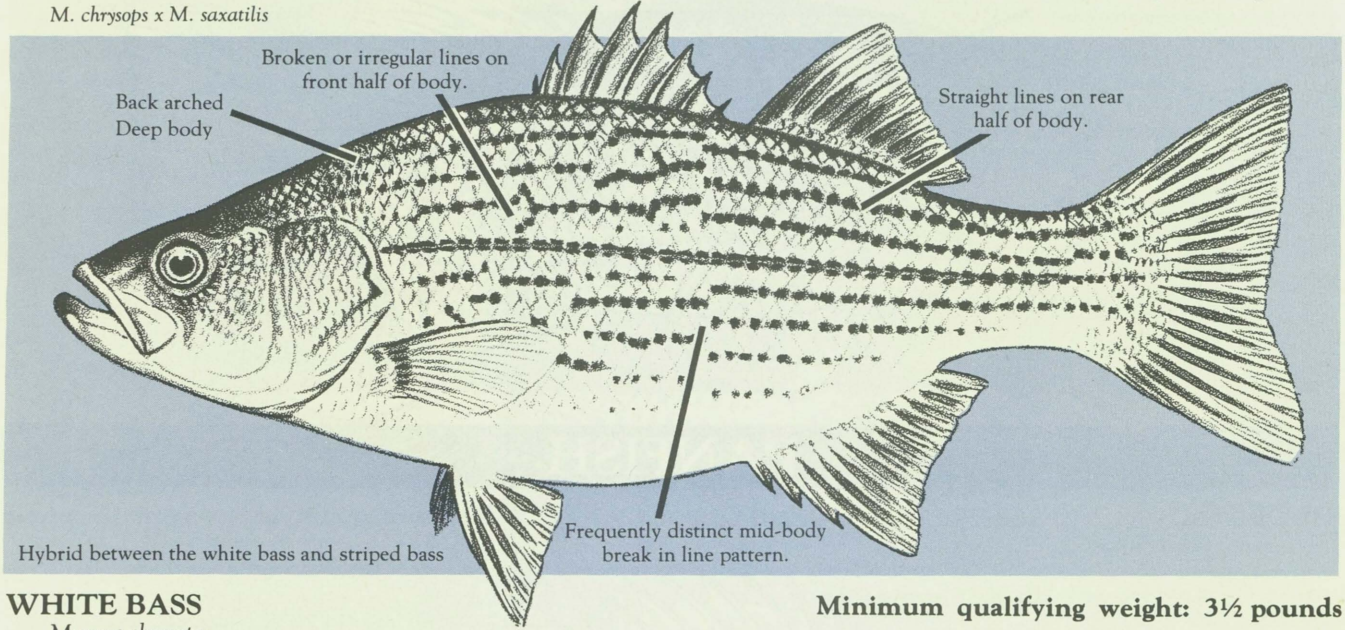
STRIPED BASS
Morone saxatilis

Minimum qualifying weight: 25 pounds


Back not arched.
Body elongate.
Distinct stripes
sometimes irregular

SUNSHINE BASS
M. chrysops x M. saxatilis

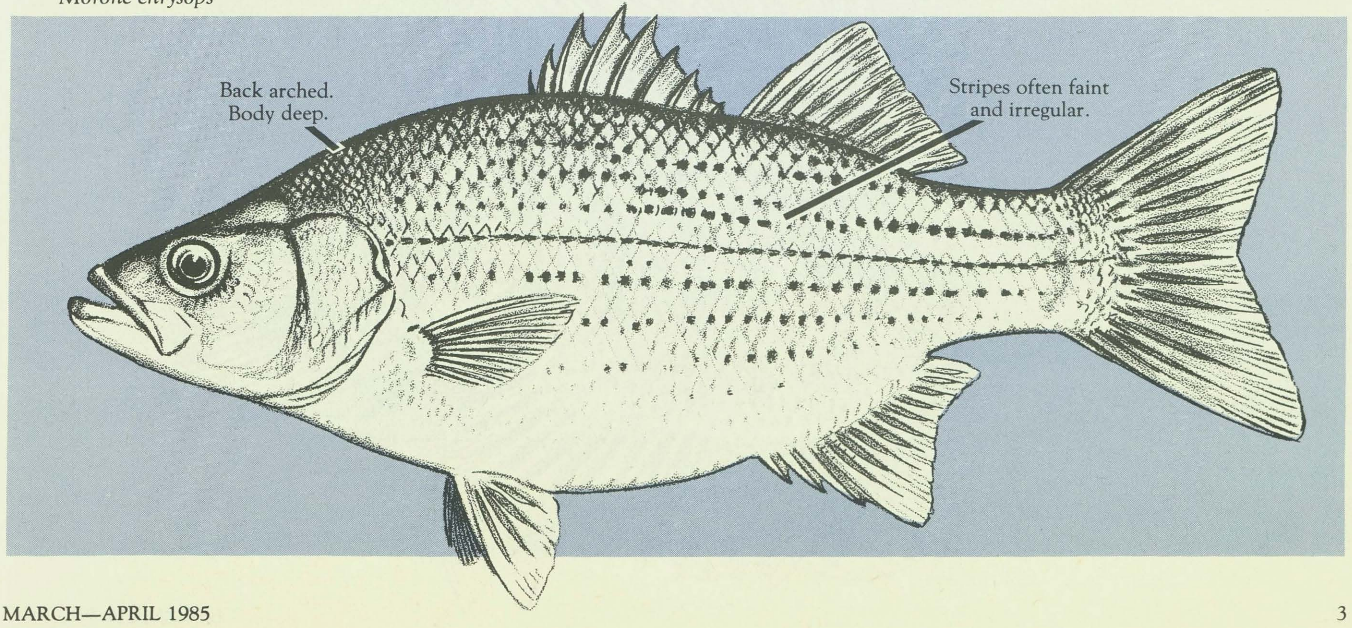
Minimum qualifying weight: 5 pounds



Hybrid between the white bass and striped bass

WHITE BASS
Morone chrysops

Minimum qualifying weight: 3½ pounds

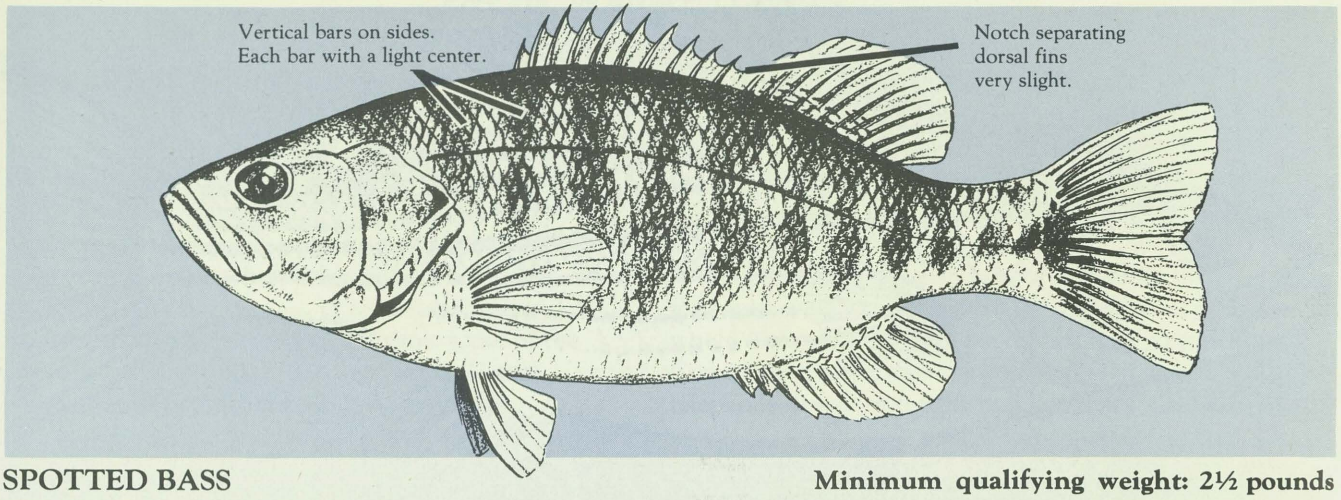

Back arched.
Body deep.
Stripes often faint
and irregular.

BASS

REDEYE BASS

Micropterus coosae

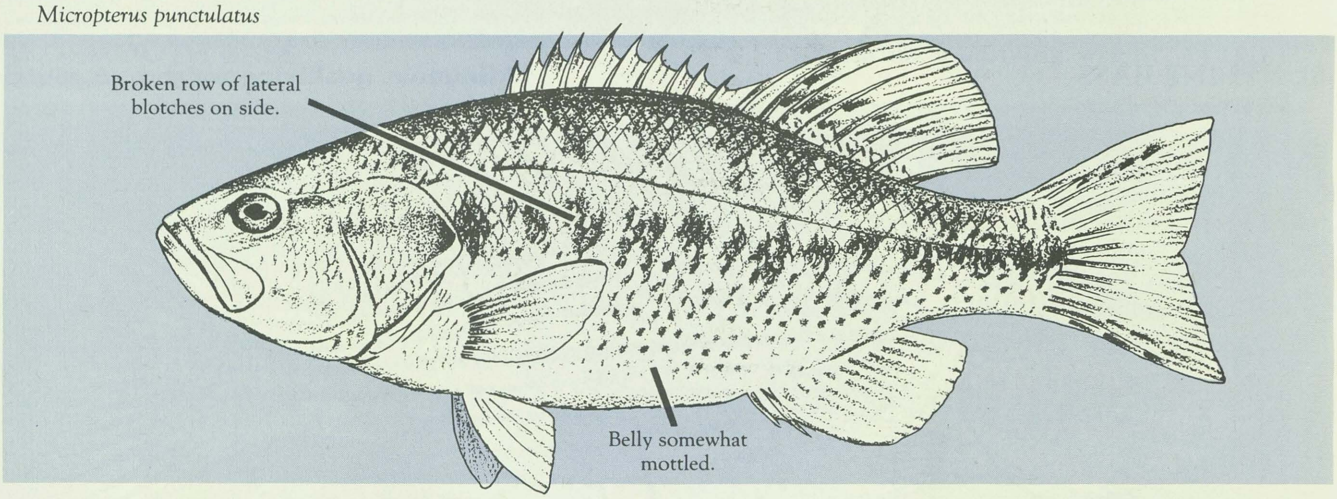
Minimum qualifying weight: 5 pounds


Vertical bars on sides. Each bar with a light center.
Notch separating dorsal fins very slight.

SPOTTED BASS

Micropterus punctulatus

Minimum qualifying weight: 2½ pounds

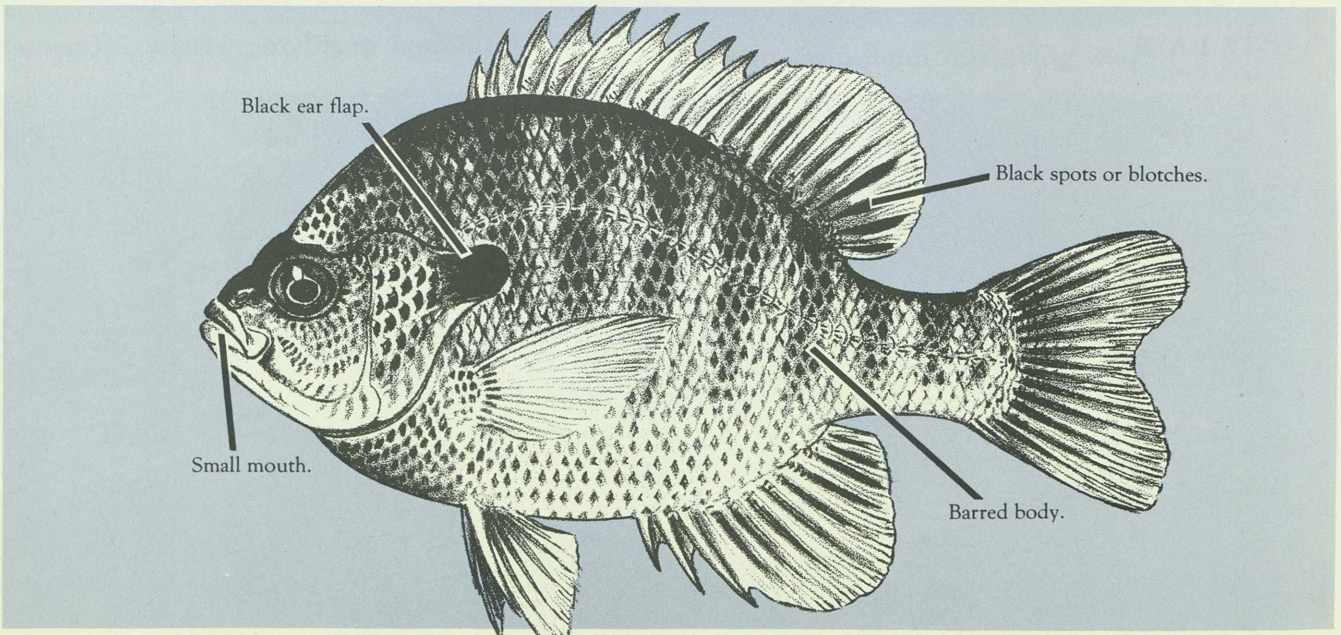

Broken row of lateral blotches on side.
Belly somewhat mottled.

PANFISH

BLUEGILL

Lepomis macrochirus

Minimum qualifying weight: 2 pounds

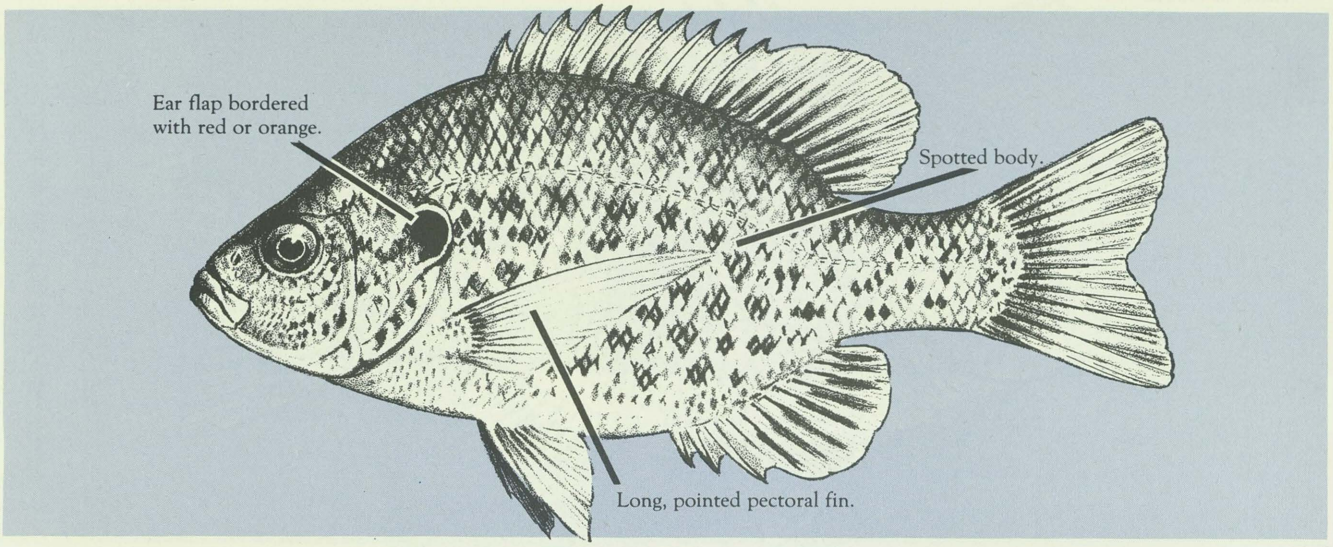

Black ear flap.
Black spots or blotches.
Small mouth.
Barred body.

PANFISH

REDEAR SUNFISH (shellcracker)

Lepomis microlophus

Minimum qualifying weight: 3 pounds



Ear flap bordered with red or orange.

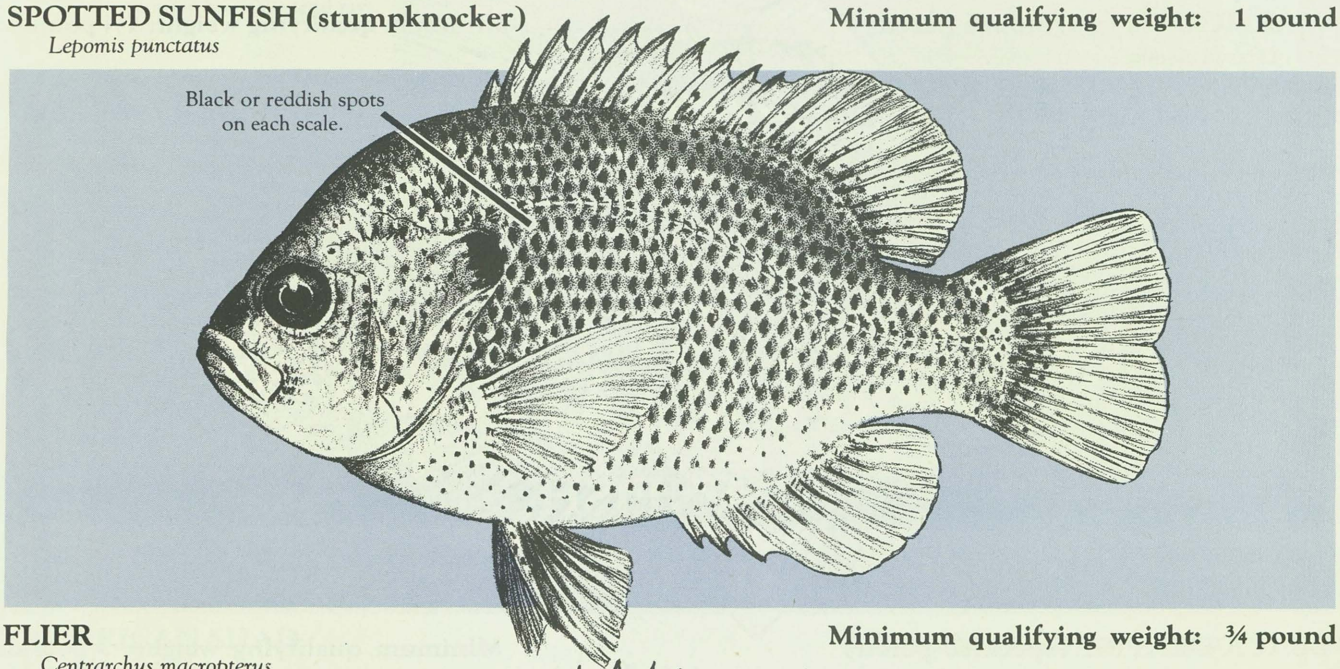
Spotted body.

Long, pointed pectoral fin.

SPOTTED SUNFISH (stumpknocker)

Lepomis punctatus

Minimum qualifying weight: 1 pound

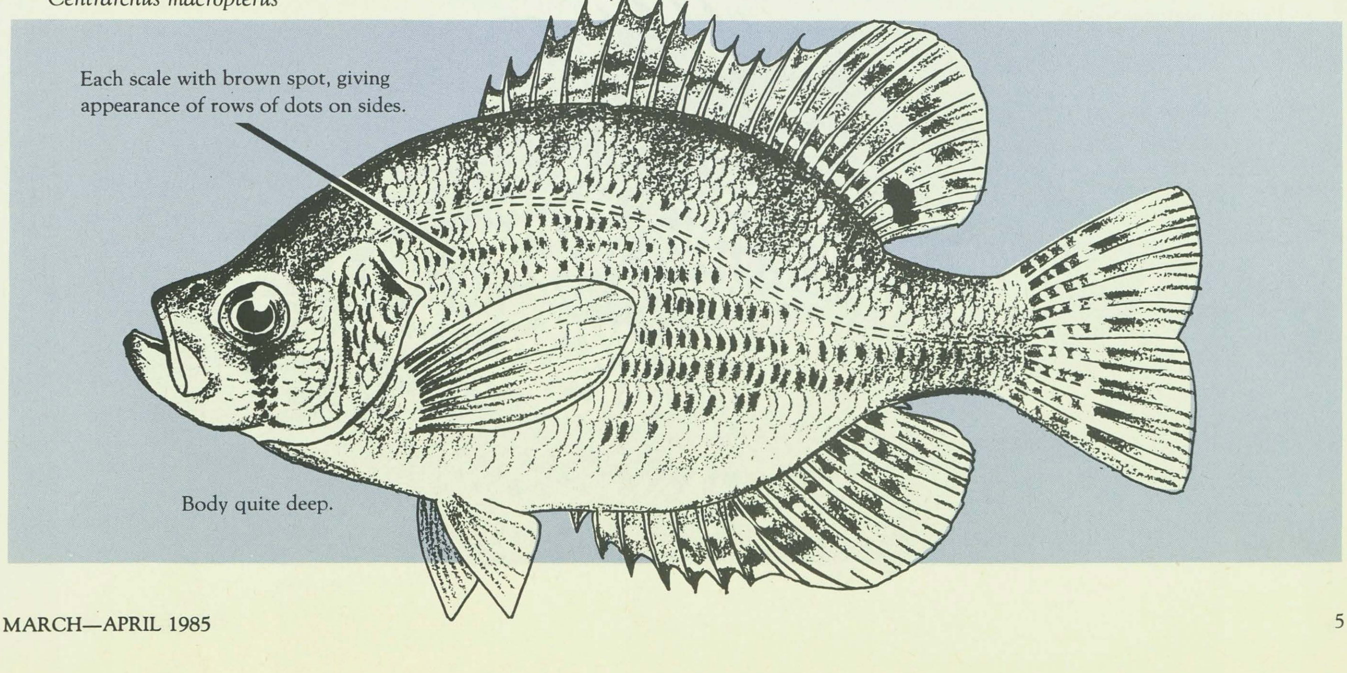


Black or reddish spots on each scale.

FLIER

Centrarchus macropterus

Minimum qualifying weight: ¾ pound



Each scale with brown spot, giving appearance of rows of dots on sides.

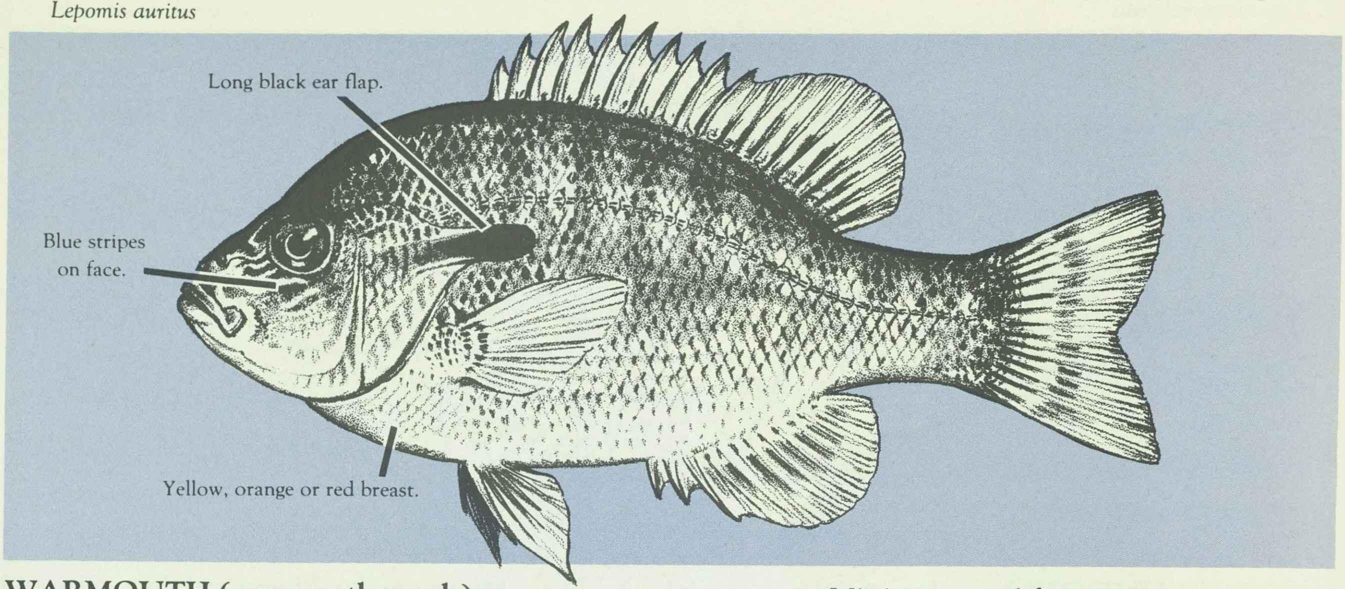
Body quite deep.

PANFISH

REDBREASTED SUNFISH

Lepomis auritus

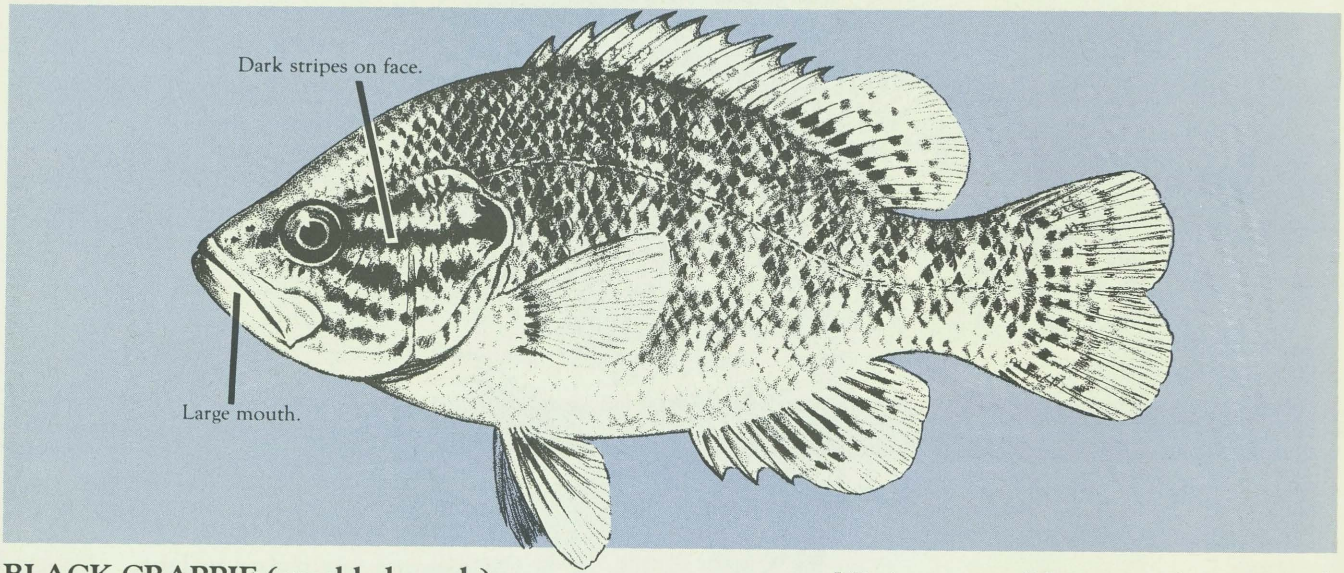
Minimum qualifying weight: 1½ pounds


Long black ear flap.
Blue stripes on face.
Yellow, orange or red breast.

WARMOUTH (warmouth perch)

Lepomis gulosus

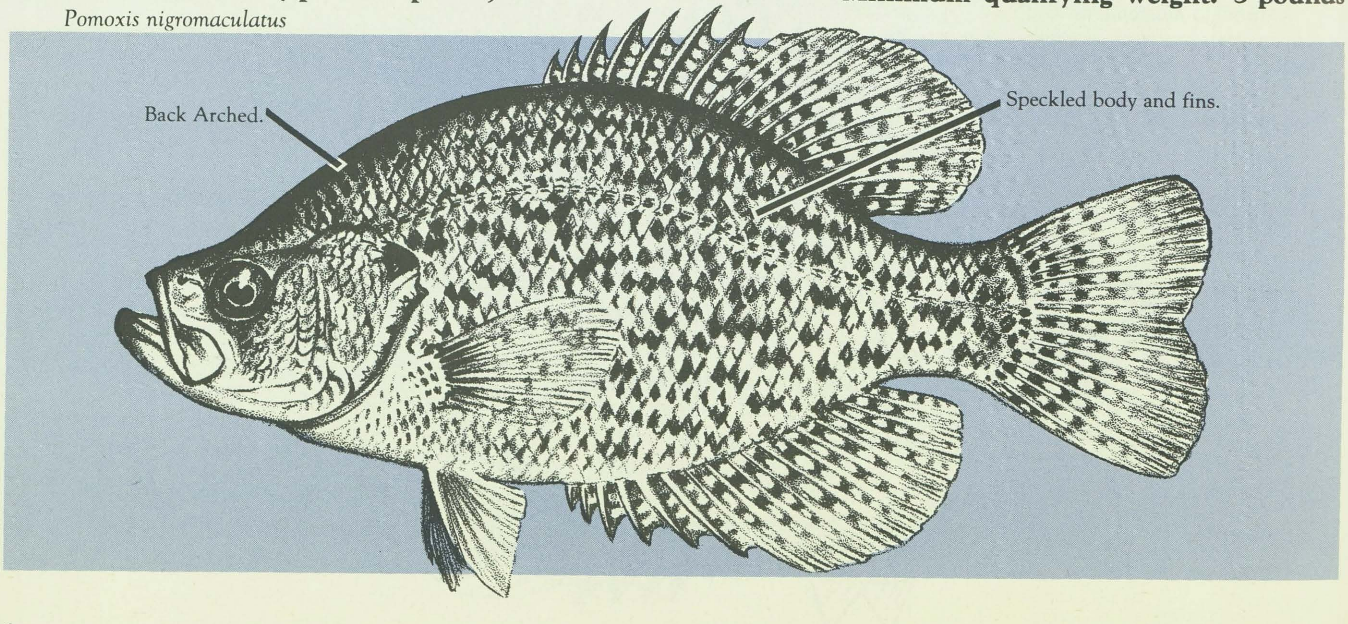
Minimum qualifying weight: 1¼ pounds


Dark stripes on face.
Large mouth.

BLACK CRAPPIE (speckled perch)

Pomoxis nigromaculatus

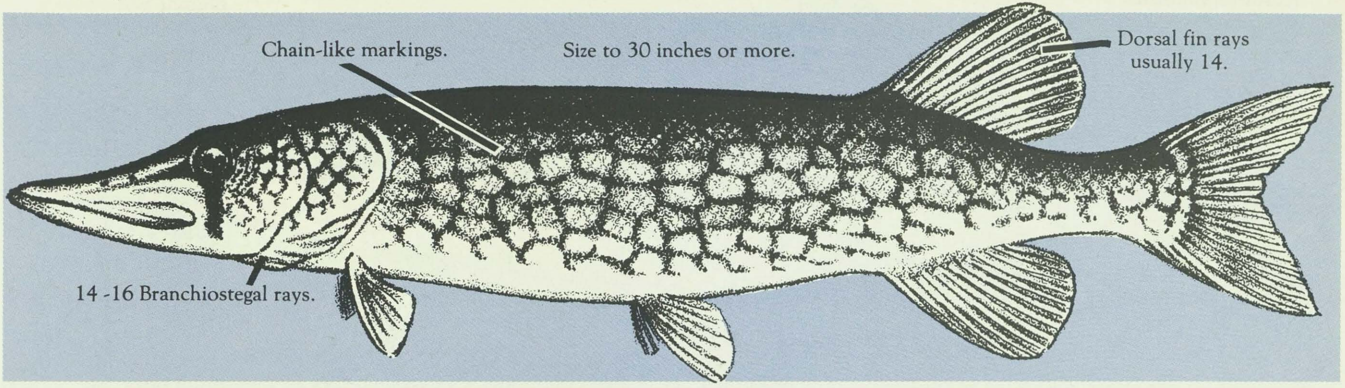
Minimum qualifying weight: 3 pounds

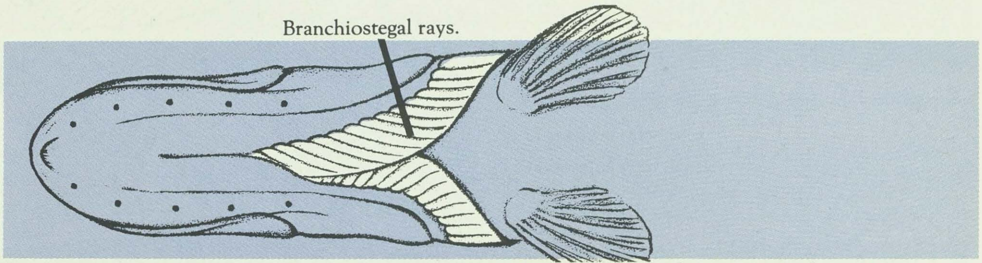

Back Arched.
Speckled body and fins.

PICKEREL

CHAIN PICKEREL
Esox niger

Minimum qualifying weight: 6 pounds

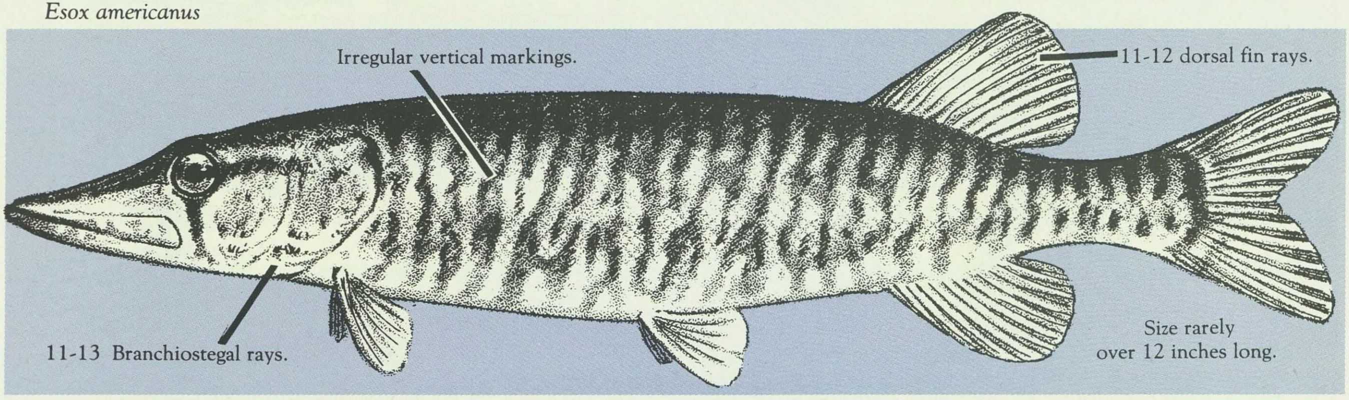

Chain-like markings.
Size to 30 inches or more.
Dorsal fin rays usually 14.
14 -16 Branchiostegal rays.


Branchiostegal rays.

Underside of pickeral head showing branchiostegal rays.

REDFIN PICKEREL
Esox americanus

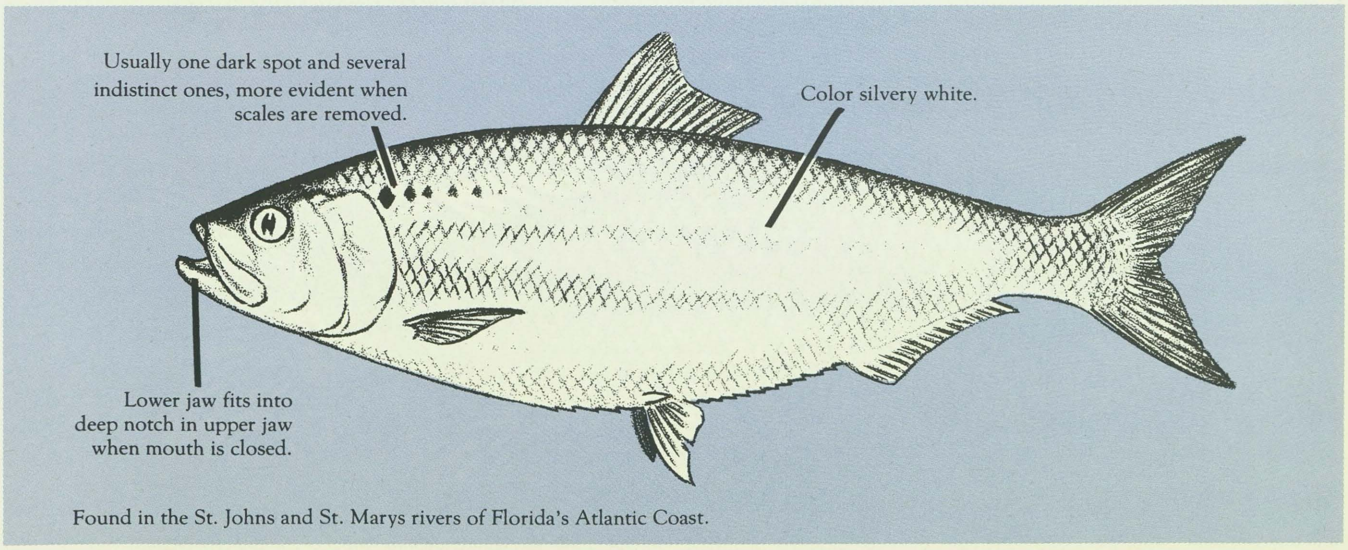
Minimum qualifying weight: ¾ pound


Irregular vertical markings.
11-12 dorsal fin rays.
11-13 Branchiostegal rays.
Size rarely over 12 inches long.

SHAD

AMERICAN SHAD
Alosa sapidissima

Minimum qualifying weight: 3 pounds


Usually one dark spot and several indistinct ones, more evident when scales are removed.
Color silvery white.
Lower jaw fits into deep notch in upper jaw when mouth is closed.

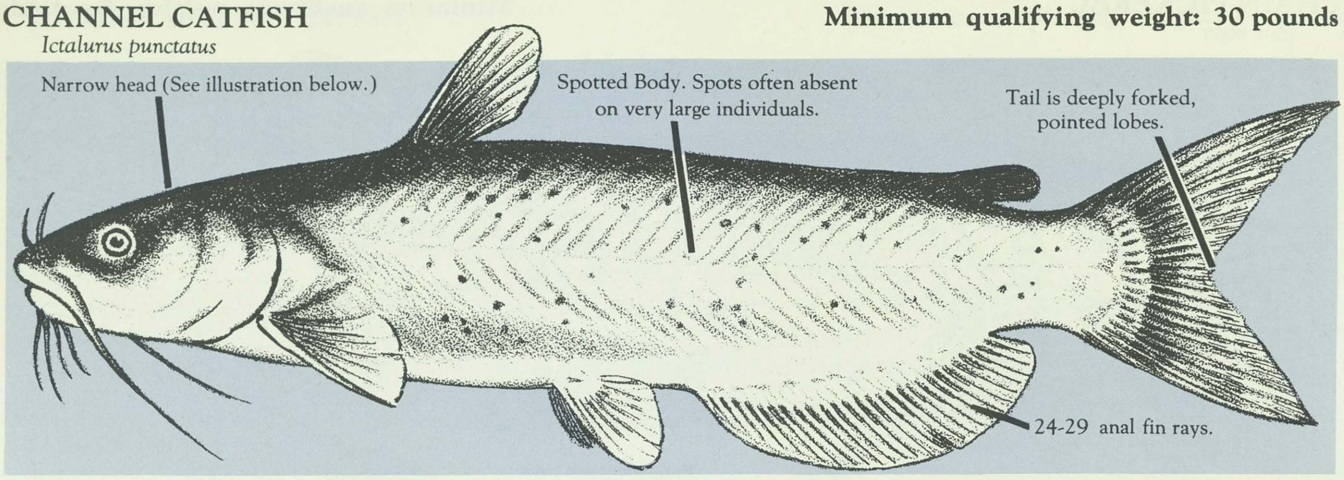
Found in the St. Johns and St. Marys rivers of Florida's Atlantic Coast.

CATFISH

CHANNEL CATFISH

Ictalurus punctatus

Minimum qualifying weight: 30 pounds



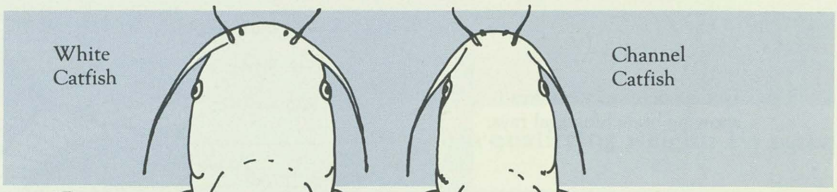
Narrow head (See illustration below.)

Spotted Body. Spots often absent on very large individuals.

Tail is deeply forked, pointed lobes.

24-29 anal fin rays.

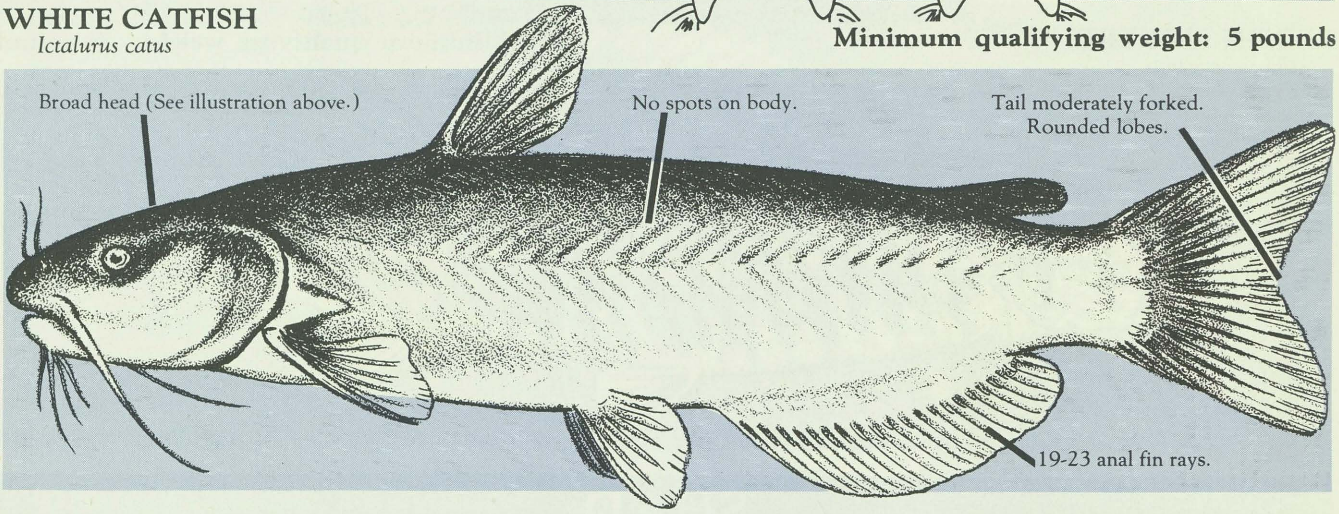
The white catfish has a relatively broader head than the channel catfish.



WHITE CATFISH

Ictalurus catus

Minimum qualifying weight: 5 pounds



Broad head (See illustration above.)

No spots on body.

Tail moderately forked. Rounded lobes.

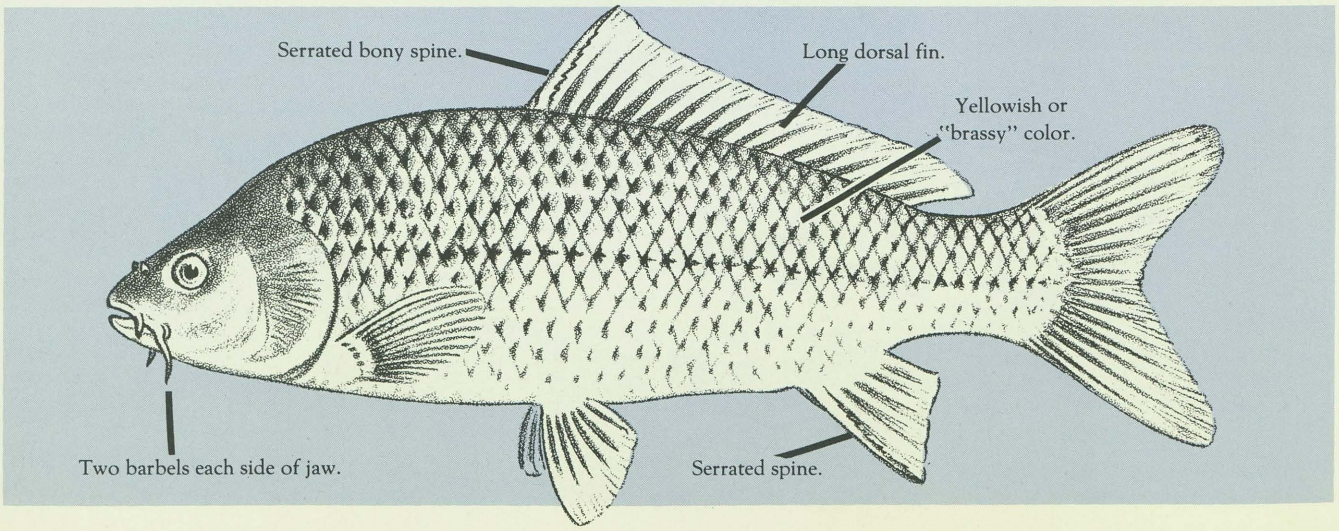
19-23 anal fin rays.

CARP

CARP

Cyprinus carpio

Minimum qualifying weight: 20 pounds



Serrated bony spine.

Long dorsal fin.

Yellowish or "brassy" color.

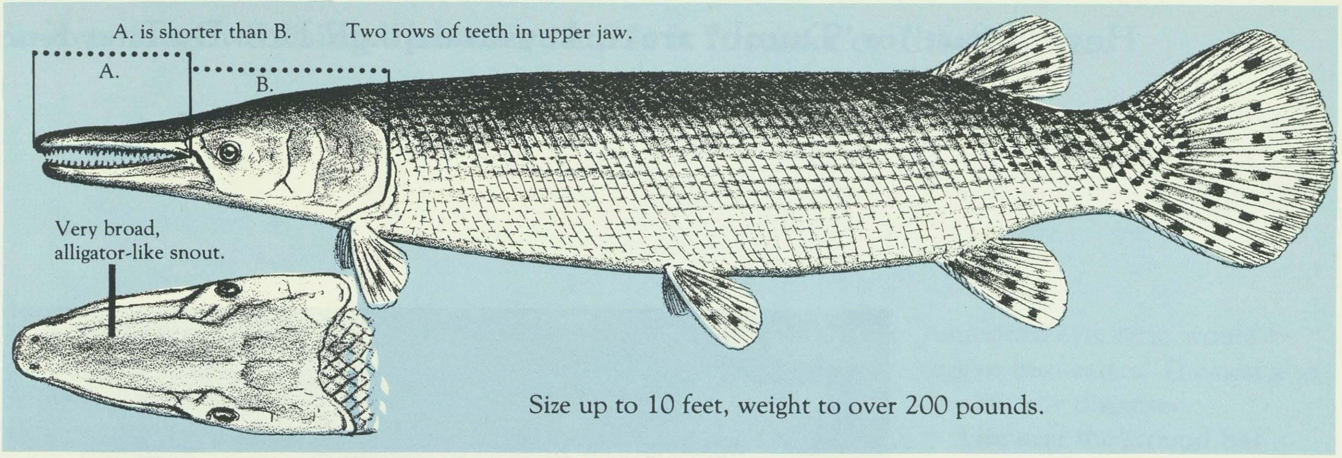
Two barbels each side of jaw.

Serrated spine.

GAR

ALLIGATOR GAR
Atractosteus spatula

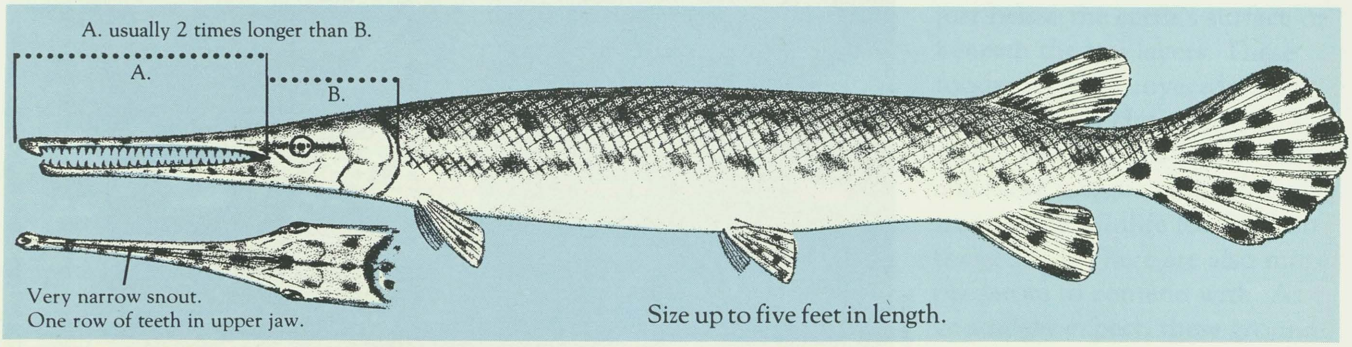
Minimum qualifying weight: 70 pounds


A. is shorter than B.
Two rows of teeth in upper jaw.
A.
B.
Very broad, alligator-like snout.

Size up to 10 feet, weight to over 200 pounds.

LONGNOSE GAR
Lepiososteus osseus

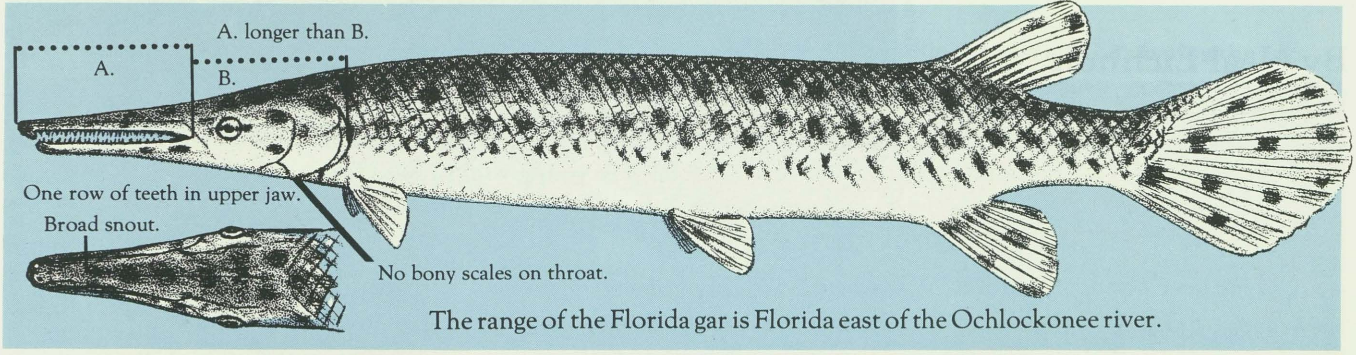
Minimum qualifying weight: 25 pounds


A. usually 2 times longer than B.
A.
B.
Very narrow snout.
One row of teeth in upper jaw.

Size up to five feet in length.

FLORIDA GAR
Lepiososteus platyhinchus

Minimum qualifying weight: 5 pounds

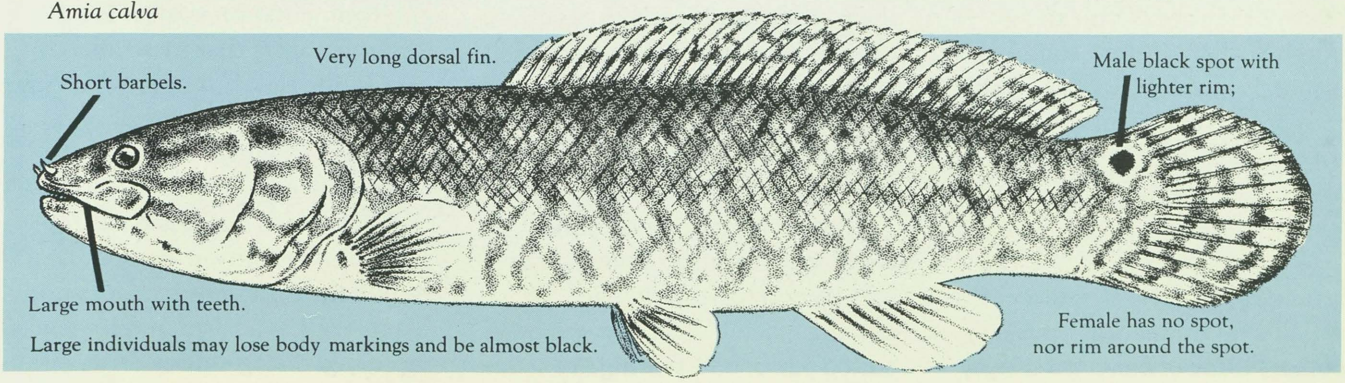

A. longer than B.
A.
B.
One row of teeth in upper jaw.
Broad snout.
No bony scales on throat.

The range of the Florida gar is Florida east of the Ochlockonee river.

BOWFIN

BOWFIN or "MUDFISH"
Amia calva

Minimum qualifying weight: 15 pounds


Very long dorsal fin.
Short barbels.
Male black spot with lighter rim;
Large mouth with teeth.
Female has no spot, nor rim around the spot.

Large individuals may lose body markings and be almost black.

BIRD B

How "Smart" or "Dumb" are turkeys and quail? How Do They Know

Lovett Williams-Photograph

A flock of young wild turkeys forage for food.

By Neal Eichholz

Biologist, Office of Environmental Services

Every year about this time, around the coffee table or a gathering, the subject of wild turkeys or bobwhite quail comes up, with speculation about how "smart" or how "wise" they are. Typical questions from these round-table discussions might include how the birds know when to sound their mating calls, when to begin nest construction, or how to care for their young.

Without elaborating on the intelligence of birds, suffice it to say that when mating time comes, these critters are simply and unavoidably answering Mother Nature's call. If you consider the size of a quail or turkey's brain—both are smaller than a walnut—and consider that unlike the humans who discuss them, they don't read newspapers or watch television weather forecasts, it should be apparent that their survival is not solely dependent upon intelligence.

Mother Nature has a rather foolproof formula: Those birds that initiate courtship and nesting when conditions are best suited for brood rearing are more likely to be successful in rearing their young and to genetically pass along these tendencies to their offspring. Thus, successful behavior patterns are the result of natural environmental pressures. For example, birds that mate and nest in the fall or winter tend not to have successful reproduction because the winter cold usually freezes the eggs or chicks.

Winter also has less food for baby birds—a lower insect population, and fewer plants and plant seeds available to the rapidly growing chicks. If the

RAINS

When to Begin Raising Their Young? Is It Instinct or Intelligence?

eggs are laid and hatched in summertime, intense heat, heavy rains or disease-spreading insects take their toll. During any season other than the best season, reproduction is almost guaranteed to fail. Mother Nature's experiments with mating, egg-laying time and hatching time are without forgiveness, as her failures die and therefore are seldom repeated. On the other hand, successes occur year after year.

Of the various quail and turkey adaptations that have proven successful over the test of time is the social behavior of these birds. Living on the ground has many dangers and there is safety in numbers, especially when staying alive depends on detecting predators by eyesight. Hence, there is a survival benefit in the social flocking and coveying tendencies of turkeys and quail.

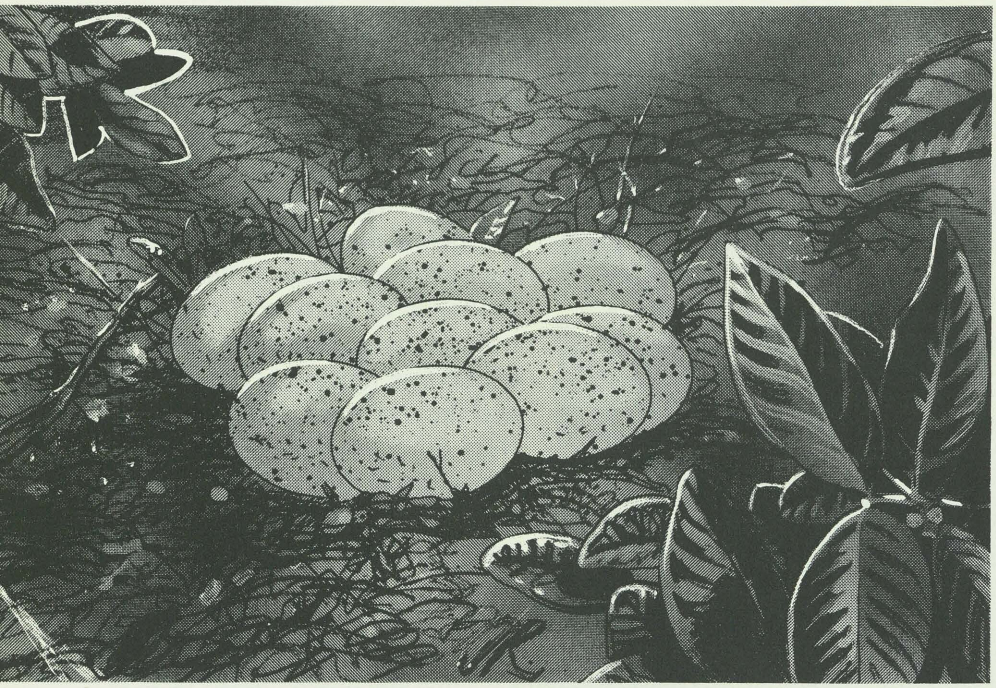
Ground-dwelling birds tend to be camouflaged to match or blend with their surroundings. This aids their concealment while feeding or attending the nests. On the nest, setting birds are nearly invisible to the untrained eye, or to would-be egg or bird eaters. The nest also is naturally disguised.

Life near the ground has advantages. Many food items are available close to the ground, just below the earth's surface or beneath the leaf layers. These foods can be uncovered readily by scratching. However, there are no free lunches in the wild, and there is more competition from other wildlife for food on the ground. There are also more predators to contend with. As you might expect, these ground birds have strong feet for ▷

Unlike turkeys, bobwhite quail males (rear) and females (front) share in tending the nest and incubating the eggs.

William Greer-Photograph

Even egg hatching has a strategy for survival, since it can be quite dangerous in the wild.



scratching and powerful legs for running. They did not develop them in order to survive—they survived because they developed them.

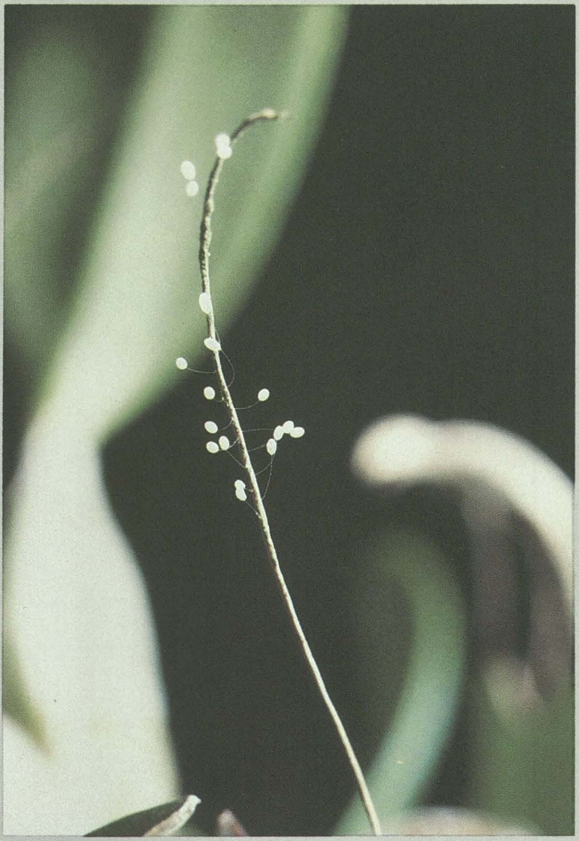
Male and female bobwhite quail share in tending the nest and incubating the eggs. Both sexes have feathers that blend with the environment. However, only the hen turkey participates in nesting and only she is colored to make detection difficult. The male turkey, on the other hand, is more brightly colored than the female and does not take part in incubation or rearing the young. This difference reflects how natural forces vary in how they affect closely related wildlife, as well as dissimilar species.

Even egg hatching has a strategy for survival, since it can be quite dangerous in the wild. Freshly opened or hatched eggs give off odors that may attract hungry predators. Although eggs are laid over a period of several weeks, they all hatch within a few hours for the bobwhite and the turkey. If the birds are unsuccessful at hatching on their first nesting attempt, they will usually nest again. But if a brood is hatched, there is normally no attempt to raise a second brood if the young are lost.

Another adaptation for survival is that baby quail and turkeys are *precocial* and have a high degree of independence immediately after hatching. Shortly after emerging from the egg, the young begin actively feeding and moving around. Being born on the ground, it is advantageous to move away quickly from the nest, especially if the bird is part of a large family.

How do turkeys and bobwhites always seem to know when to begin their mating calls, even though the weather patterns vary greatly from year to year? Although weather plays a key role in triggering reproduction of these birds, day length is also a factor. As the months go by, the number of daylight hours are more constant from year to year than are temperatures, which tend to show wide variation. Both these environmental factors interact on the birds' physiology to render them ready for mating.

Camouflage, egg hatching, precocial young, renesting and social behavior all aid the bobwhite and the wild turkey in survival and are examples of Mother Nature's successful experiments. This is why the mating calls and courtship of bobwhites and tom turkeys always begin around the same time of year in spite of local weather, or predictions from the most popular person at the coffee table. It is also why many well-meaning hunters and others sometimes erroneously credit simple birds with superior intellects and how the term "birdbrain" may have been derived. □

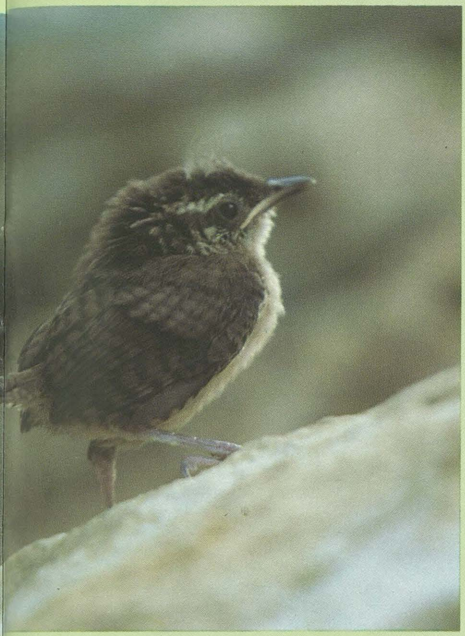


Spring creeps up.

Slow and fragile at first...

Photographs by John Waters Jr.

then bursts forth like an opening blossom,



filling everything with energy and renewal...

on its way to summer.

FAKAHATCHEE Strand

The timeless beauty of this unique area remains in potential jeopardy.

By Robert H. Gore, Ph.D
Coastal Zone Management Specialist

Stretching away in a northeasterly-southwesterly direction from Florida's Big Cypress Swamp, the Fakahatchee Strand first appears along SR 84 (Alligator Alley) or US 41 (Tamiami Trail) as a distinct, deep green tree line on the horizon, rising abruptly from a flat, yellow-brown sawgrass prairie. On closer approach, the silhouette resolves into a series of elongated forests, rising one against another toward the main and highest tree line in the center. Cabbage palms, cypress, scattered slash pines and an abundance of other trees all mix together to form a dense tropical mixed-swamp forest. It is the largest of its kind in the Big Cypress Swamp area.

To the Seminole Indians who once lived here, *Fakahatchee* meant "River of Vines." It could also be translated as "River of Clay." Although vines such as wild grape, greenbrier and Chinabrier (often called "tramps's trouble" because of its sharp thorns) grow here, the immediate impression is more of a large, meandering river bottom of trees. A truly elegant mixed-hardwood-swamp forest, the Fakahatchee Strand supports some 170 tree species or tree-like shrubs, including palms, maples, bays, willows, cypress, oaks, ash, pond apple and other water-associated flora. The vast majority are native to Florida or the Caribbean area, with a smaller number being survivors from the last Ice Age.

Trees are only part of the Fakahatchee. It also has a dense understory of terrestrial shrubs, plants which grow near water and aquatic plants. Many different ferns and mosses cover the trees and forest floor, as well as nearly 60 different epiphytic and terrestrial bromeliads and orchids. Some of these are known nowhere else in the world. Such a diversity of plant life has attracted both commercial loggers and private plant collectors. As a result, the strand has been severely altered from its original composition. Yet it retains much of the dark and humid ambiance that beckons adventuresome novices and ▷

Dr. Robert H. Gore-Photograph

Dr. Robert H. Gore-Photograph

GFC Photograph

FAKAHATCHEE Strand

ardent nature lovers into its mysterious interior.

Deep within the strand, perhaps along the edge of some small, open cypress-fringed pond, explorers may enjoy the botanical complexity, where every tree is clothed in orchids, bromeliads, ferns, peperomias, Spanish moss and other epiphytic plants. In these verdant, shimmering naves, ignored or overlooked by the loggers of the early mid-20th century, the Fakahatchee maintains its primeval and peaceful glory.

Water created the Fakahatchee Strand, and water forms its life-supporting and life-limiting systems. The strand itself is merely one of several sloughs that were formed in low depressions of the rocky limestone that makes up much of the surface of south Florida. In these depressions, sheet flow surface water moves slower than on higher, more sandy elevations. These standing waters allow hydric plant species to colonize, and it limits or excludes species which require higher, drier soils.

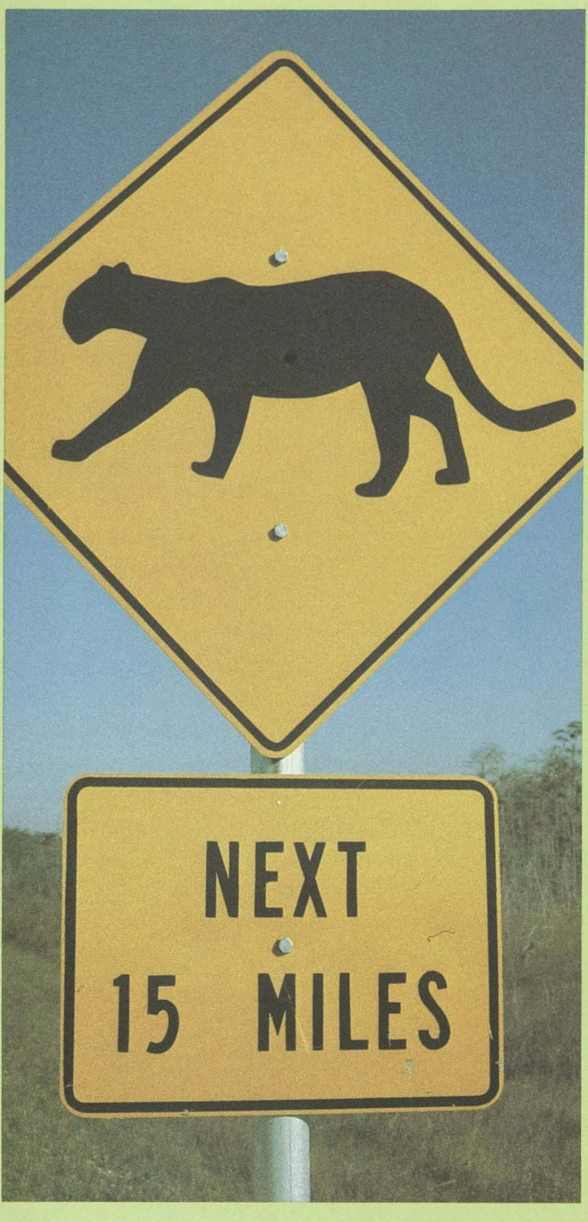
Originally, all of southwestern Florida was flooded seasonally, often for the greater part of a year. Plants that adapted to nearly continuous immersion (or wet soil) soon dominated. The Golden Gate Canal System severely altered this original water flow to such an extent that wildfires and arson have become very real problems whenever the vegetation dries out, both within and adjacent to the strand.

The most magnificent trees in the Fakahatchee are the cypress, some of which once soared to more than 70 feet in height and had bases of 15 feet or greater in circumference. Continual natural seeding by parent trees produces younger trees around the strand's perimeter, which is shaped in part by surface water flow. Smaller water-tolerant trees, such as pond apple, pop ash, water oak and swamp maple, soon colonize in and among the larger cypress, contributing to the ecological complexity and diversity.

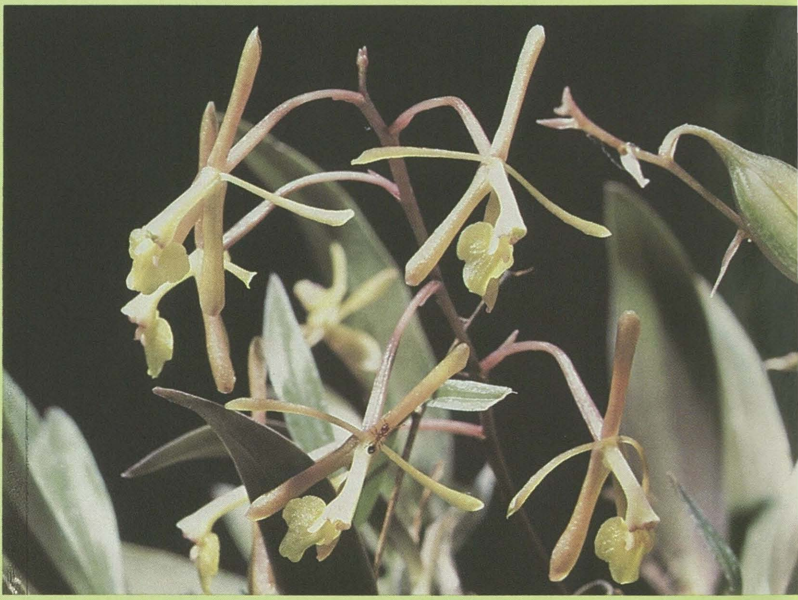
All this vegetation produces a continuing rain of leaf litter, carpeting the strand's floor. Bacteria and fungi break down the litter and release its nutrients. In turn, the nutrients are utilized by higher organisms, beginning with protozoans and progressing to macroinvertebrates such as snails and crustaceans, and to numerous worms and insects. This complex food web eventually leads to fish, then to higher carnivores such as turtles, snakes, wading and diving birds, alligators and mammals. Many of these animals prey on each other's offspring.

The Fakahatchee's vegetation has another important aspect. As some plants grow and reseed, they form continuously enlarging, relatively stable platforms for a multitude of ▷

Water created the Fakahatchee, and water remains an element of its life-supporting ecology.


Dr. Robert H. Gore-Photograph

John Waters Jr.-Photograph


John Waters Jr.-Photograph

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FAKAHATCHEE Strand

Motorists on highways passing here are advised by signs that the endangaered Florida panther ranges in the area. Another important mammal, the Florida black bear, lives in the strand. At left, a bear shakes the water off herself after a swim in the tannin-stained water. Below, one of the native Florida orchids, *Epidendron conopseum*, the green fly orchid once collected by William Bartram, blooms in a profusion of tiny green flowers that are strongly scented only at night. Note the tiny ant on one of the flowers to show its size. Collectors of rare plants have destroyed much of the native epiphytic plant population which once grew here in great numbers. At bottom left, a marsh rabbit seeks concealment in the lush greenery. Birds, such as the limpkin standing on one leg in this photograph, also dwell in this swamp. Although the limpkin eats snails, other animals here prey on aquatic-dwelling species such as leopard frogs which live their entire lives in the strand.

other plants that utilize their roots, trunks, limbs and bark as holdfasts or as nutrient-entrapping pathways for rainwater. Living among the epiphytes are numerous species of insects and spiders. Here, life may be nutritionally easy, but also subject to predation. Many bird species also find a paradise of nesting greenery and an ample food supply. In turn, snakes find a food source in their eggs and nestlings.

During the early 1940s through 1950s, the vast cypress forest that comprised much of the Fakahatchee Strand was logged by the Lee Tidewater Cypress Company. The logging operation incorporated a series of tramways from which sidings were extended to open nearly every part of the area to the logger's saws. Nearly all trees of commercially valuable size were cut, although not all were removed. Today, walking along the now shrub-entangled tramways to deeper areas of the strand, you can see many slowly decaying fallen giant cypress trees, now reduced to dark and crumbling logs cloaked with a living shroud of green, brown and yellow mosses and ferns. Within their dark interiors live a multitude of small invertebrate and vertebrate animals.

With the extirpation of the largest cypress, the general botanical ecosystem was changed. Other faster-growing swamp-loving hardwoods, such as maple, oak and willow, became dominant. Long-abandoned tramways soon interrupted or diverted the seasonal sheet water flow and provided permanently raised areas in a region which, at an earlier time, was almost continually submerged. This allowed understory shrubbery to gain a foothold and proliferate, and the vegetational complex of the Fakahatchee was forever changed. The strand is, perhaps, as densely vegetated now as then, but the variety of species is different.

With the departure of logging, the strand soon suffered another peril, less damaging to the entire forest, but more insidious in its depredation. Long recognized for its abundance of rare epiphytic orchids, ferns, bromeliads and other beautiful plants, collectors began a systematic invasion of the Fakahatchee that continues even today, in spite of strict laws and penalties for collecting protected native plants. Even though signs clearly say all wildlife is protected here, many native orchid species are rapidly dwindling, and some have vanished completely.

Such beautiful forms as the native vanilla orchids, as well as some species known only by their scientific names, are known to exist now only in the most remote areas of the strand. These orchids can only grow in a restricted, tenuously close symbiotic relationship with certain fungi, called *mycorhizae*, that

▷

FAKAHATCHEE Strand

can live only in certain parts of the strand. Moreover, when such natural catastrophes as south Florida's occasional killing frosts, cyclic droughts, wildfires, death of host trees, or even simple dislodgement by weather or animals occurs, the epiphytes fall to the forest floor and eventually die.

Perils also exist for many of the Fakahatchee's mammals. Some unique species call the Fakahatchee Strand home, including the endangered Florida panther and impressive Florida black bear. Increased vehicular traffic in the region has prompted a new awareness of these rare animals and highway signs now remind drivers to use caution.

Other wildlife seems less susceptible to these hazards. Within the strand live wood storks, ibises, numerous hawks, wild turkeys and bald eagles. More common animals live here too—raccoons, opossums, skunks, otters, deer and bobcats. At night, the Fakahatchee comes alive with hordes of ravenous mosquitoes, which rise from the swampy vegetation. They make nighttime nature observations during the wet season feasible for only the most dedicated and tolerant.

Dr. Robert H. Gore-Photograph

A mass of floating water lettuce surrounds a turtle as it surfaces to breathe.

It is also not known just what effect, if any, the use of agricultural chemicals north of the Fakahatchee Strand may be having on insect pollinators and the epiphytes' host plants. The general direction of the surface water sheet flow is to the southwest, so at least some of the farm land runoff must be carried into the main portion of the strand. The entire Okaloacoochee Slough-Fakahatchee Strand watershed also may be subject to seasonal pulses of agricultural chemical runoff, and the combined effects of these remains unknown. Both plant and animal life can be affected by chemicals. Meanwhile, modern farming practices have few viable alternatives to chemical use.

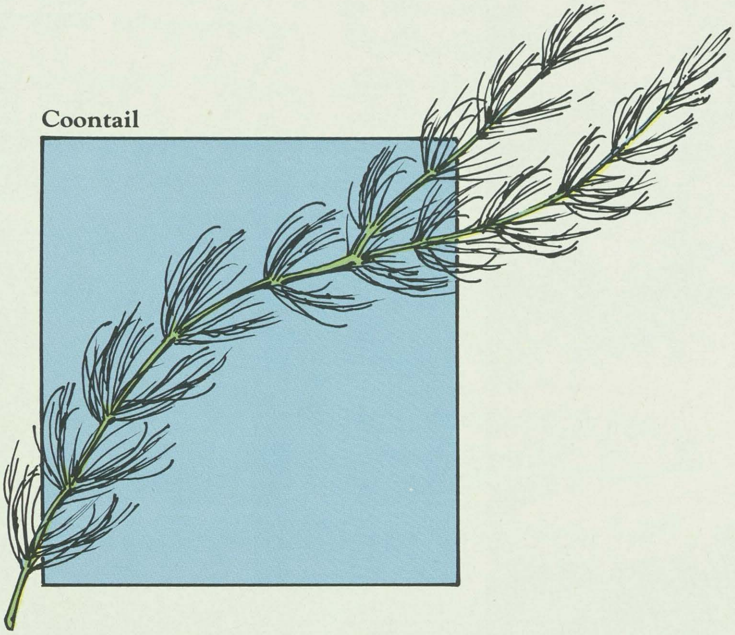
For all of its unique habitats and primitive swamp-like nature, the Fakahatchee Strand is merely another functioning part of a vastly larger, more complex water-based ecosystem in southwestern Florida. Similarly vegetated smaller strands lie more or less parallel to the Fakahatchee, and take their water (as does the Fakahatchee) from lakes and sloughs immediately to the north. The water from these regions joins a larger flow from Lake Okeechobee, following the geological contours of the gently sloping southwestern Florida coastal plain.

Today, the perimeter and much of the interior of the Fakahatchee Strand has been set aside by the state of Florida as a preserve, to remain forever and further unaltered, but open for visitors. Permitted activities include walking, bicycling, motoring, canoeing and camping. Much other land in the strand's interior remains in private ownership, but property boundaries are often poorly surveyed, obscured or unknown. Moving slowly but precisely, the state eventually hopes to gain clear title to all or nearly all lands within the strand boundaries. Until then, the timeless beauty of this unique area remains in potential jeopardy. ☐

FISHING THE GRASS

Although perceived as "weeds" by many, aquatic plants are important elements in Florida's freshwater ecosystem. They provide cover and food for many species in the complex web which includes microorganisms to largemouth bass.

Coontail



By Walter Richards

Elodea, coontail, eelgrass, rushes, bonnets, lillies, cattails, hyacinths and hydrilla—although some people recognize them for what they are and for what they do—by and large, they are too often simply viewed as "weeds." However, all these aquatic plants, together with others, provide food, shelter, oxygen and spawning space needed by the fish which inhabit our waters. In this respect, such plants are essential and beneficial to parts of the habitats in which our finest gamefish live.

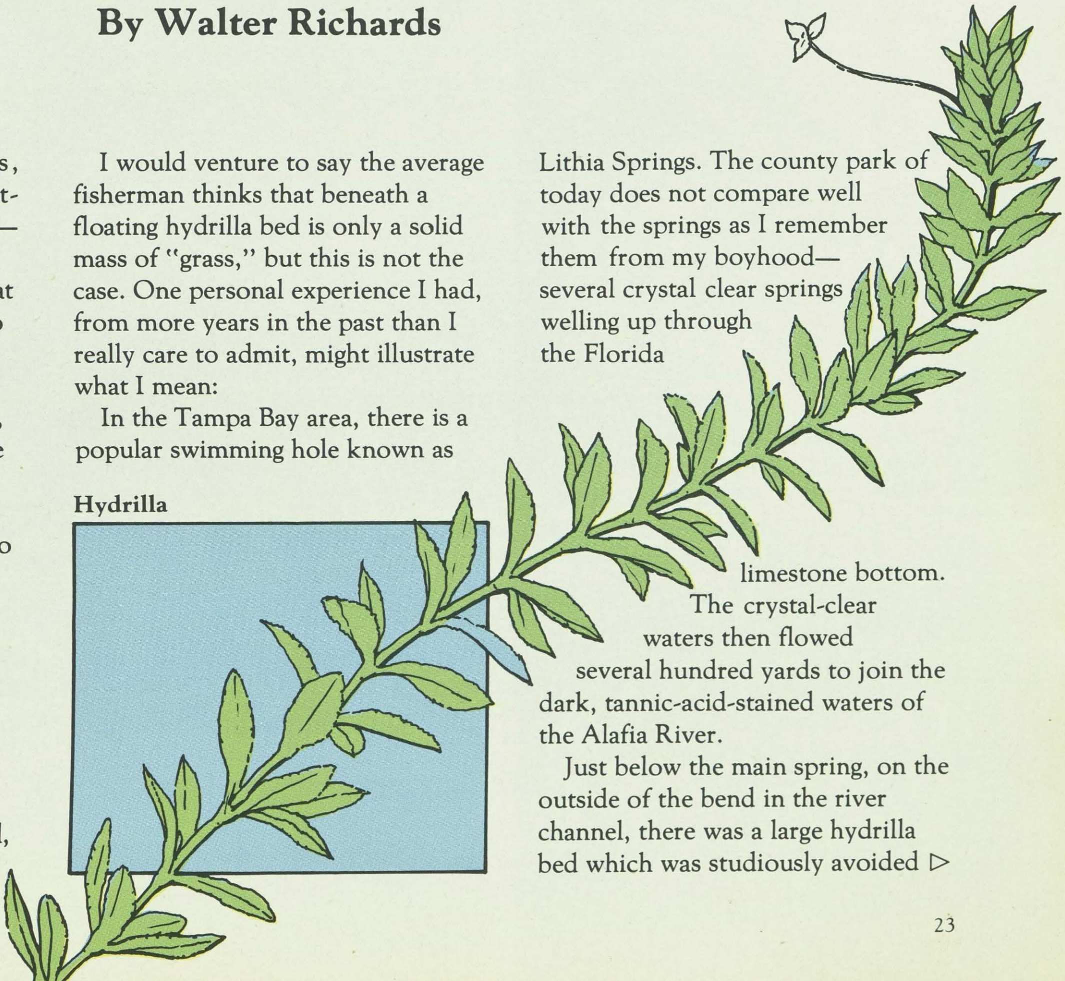
Anglers, in particular, should become familiar with the various aquatic plants in the lakes and streams they fish. This can be as important to catching fish as knowing if the water's shallow or deep, or if the bottom is mud, sand, gravel or rocks.

I would venture to say the average fisherman thinks that beneath a floating hydrilla bed is only a solid mass of "grass," but this is not the case. One personal experience I had, from more years in the past than I really care to admit, might illustrate what I mean:

In the Tampa Bay area, there is a popular swimming hole known as Lithia Springs. The county park of today does not compare well with the springs as I remember them from my boyhood—several crystal clear springs welling up through the Florida limestone bottom. The crystal-clear waters then flowed several hundred yards to join the dark, tannic-acid-stained waters of the Alafia River.

Just below the main spring, on the outside of the bend in the river channel, there was a large hydrilla bed which was studiously avoided ▷

Hydrilla



by virtually everyone for many reasons, including some imagined ones: the grass scratched; there might be snakes; a swimmer could become entangled in the grass and drown; there were hidden alligators in the grass. But the best reason was the soft muddy bottom there, which was composed chiefly of decaying, smelly vegetation which produced odors of methane gas.

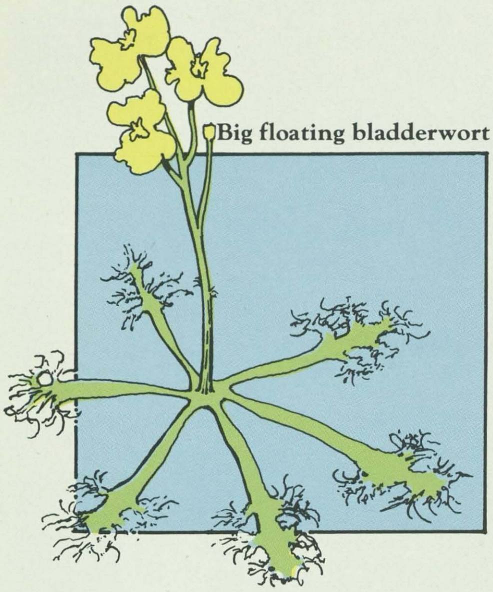
One day, as I was playing around a large limestone rock in the middle of the channel below the grass patch, I noticed a pair of teenage boys heading my way through the middle of the grass. They were equipped with diving masks, swim fins, and snorkels and were swimming through the grass below the water surface, coming up for air in spots where the grass was thin. I watched them with great fascination, expecting both young men to meet their end, entangled in clutching strands of hydrilla.

Of course, it did not happen. After some time, the pair emerged from the grass patch and swam to my "limestone island" for a brief rest. I can still recall their excitement as they discussed what they had seen—a big bass.

"Yeah, 10 pounds if he went an ounce," they speculated, before swimming off to look again.

Moments later, I borrowed my younger brother's face mask and was poking about in amazement beneath the hydrilla patch. The grass was honeycombed with underwater tunnels and openings, roofed over by the solid-looking surface mat. Plenty of sunlight penetrated the depths, allowing me to see quite well. Thinking back, I will have to allow that my imagination most likely magnified both the numbers and the sizes of the fish, but even so, there were ▷

john roberge



Big floating bladderwort

plenty! Never in my wildest dreams would I have ever guessed their presence there in the seemingly solid vegetation.

I cannot recall seeing that 10-pound bass, although there were many large bluegills and speckled perch in the clear water, tantalizingly close, but just out of reach.

In the years since, I have never forgotton what I saw that day. To this day, I never intentionally fish open, grass-free waters if I can locate a grass patch. I actively search out fishing areas which are thick in coontail, eelgrass, bladderwort, elodea and, above all, hydrilla. I know that beneath the surface, there are holes and tunnels filled with fish—just waiting for someone to lower a baited hook to them.

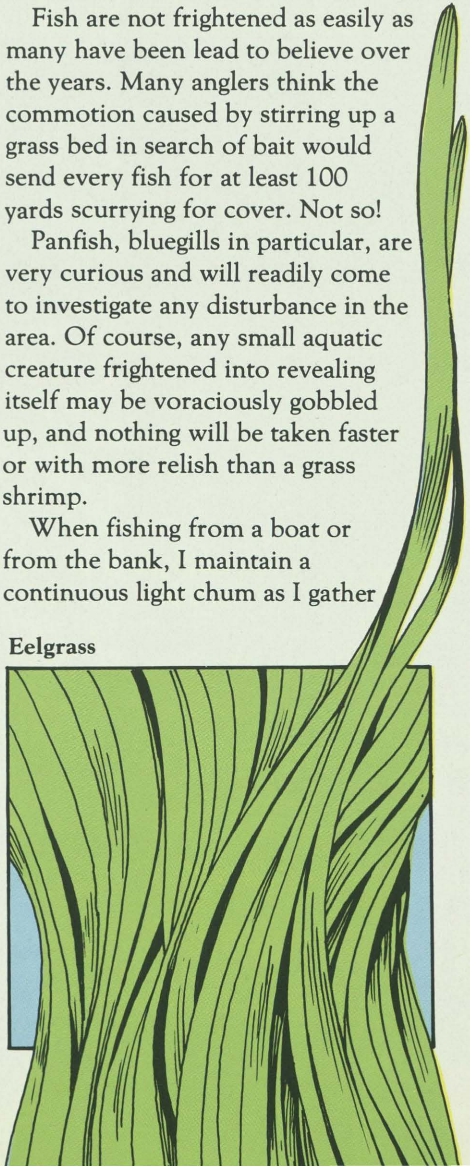
Aquatic vegetation provides food for the fish in several ways. For some fish, the grass itself is food. For others, it is the other life hidden in the grass which makes up their food chain. Small fish of many species, uncounted insects, and several species of crustations and mollusks form the largest portion of the overall food chain of our freshwater fish.

Of all food organisms, the freshwater grass shrimp is head-and-shoulders above the others as my bait choice. I catch my shrimp from the same grass beds in which I fish, using a homemade dip net. Over the years I have learned that these small crustations seem to have a particular affinity for hydrilla, at times concentrating in the grass in incredible numbers. A few minutes of work can provide you with all the bait you need for a full day's fishing. (Editor's Note: See Walter Richard's story, "Tiny Grass Shrimp—Great Bait" in the November-December 1983 FLORIDA WILDLIFE.)

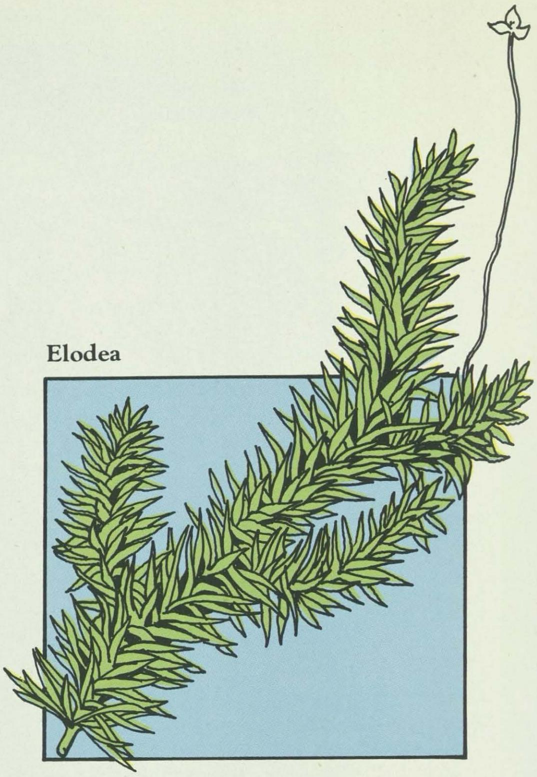
Fish are not frightened as easily as many have been lead to believe over the years. Many anglers think the commotion caused by stirring up a grass bed in search of bait would send every fish for at least 100 yards scurrying for cover. Not so!

Panfish, bluegills in particular, are very curious and will readily come to investigate any disturbance in the area. Of course, any small aquatic creature frightened into revealing itself may be voraciously gobbled up, and nothing will be taken faster or with more relish than a grass shrimp.

When fishing from a boat or from the bank, I maintain a continuous light chum as I gather bait with a dipnet. This chum consists of small shrimp, insects of all types, crayfish and small snails which I toss into any open water close by. If there are any fish in the area, they will make their presence known very quickly as they chase the free food.



Eelgrass



Elodea

I fish these shrimp on a free line. By that, I mean no weight other than the hook. I use a light wire, aberdeen-style hook and impale the shrimp through the very last joint in the tail. In this manner the bait will remain alive and active, adding to its appeal to the fish. The shrimp will attempt to swim on the surface and a large one will do so quite well. Normally, they sink slowly until a fish takes them in. Strikes come as blistering runs, slow steady runs or a single twitch of the line as the fish inhales the offering, then sits there to savor the tasty morsel.

On your next fishing trip, don't pass by that grass bed in favor of an open water fishing hole. Instead, stop by long enough to stir up the waters around the vegetation as you net a few grass shrimp and do a little chumming. Give the fish a few moments to gather, then settle down to what may be one of the most memorable fishing experiences of your life. ☐

MATCH THE HATCH

Fishing for schooling bass takes some understanding for success.

Text and Photographs
By Max Hunn

Tom Evans and I were frustrated and chagrined. Why? Because we could see the black bass frantically chasing the baitfish, but we couldn't get the bass to hit.

The bass had the bait hemmed in a large cove in the Hernando pool, part of the Tsala-Apopka chain of lakes in west-central Florida, and were feasting with the frantic energy only schooling bass can display. Yet, our total bag for a little more than an hour in the middle of this chowline turmoil was only six bass. We used everything in our tackle box, but we hadn't been able to connect.

Fishing for school bass can be frustrating, but it also can be rewarding. That happened on my two-day trip with Jack Westberry of Tampa, and his son, Brent, to Lake Kissimmee. In a couple of hours one afternoon, the three of us hooked 40-odd bass up to six pounds on Rat-L-Trap lures. And the following morning, we boated and released another 21. We couldn't bring a Rat-L-Trap through the bass without a hit.

These two incidents are typical of school bass fishing and they also emphasize several key points in this type of angling. As Evans and I grew increasingly frustrated fishing the Hernando pool, we discussed some facets of this type of angling.

"If only we had a lure that came close to matching the hatch, we'd have a ball," Evans moaned. But we had nothing.

That day the bass were feeding on tiny, glass minnows, and we didn't have any lures that came anywhere near matching their feeding preference. What meager luck we had was using clear Tiny Torpedoes on the surface. But the fish were moving so fast they were usually out of casting range when surfacing. Then they'd sound, and we had no lure that would entice them to hit underwater. ▷

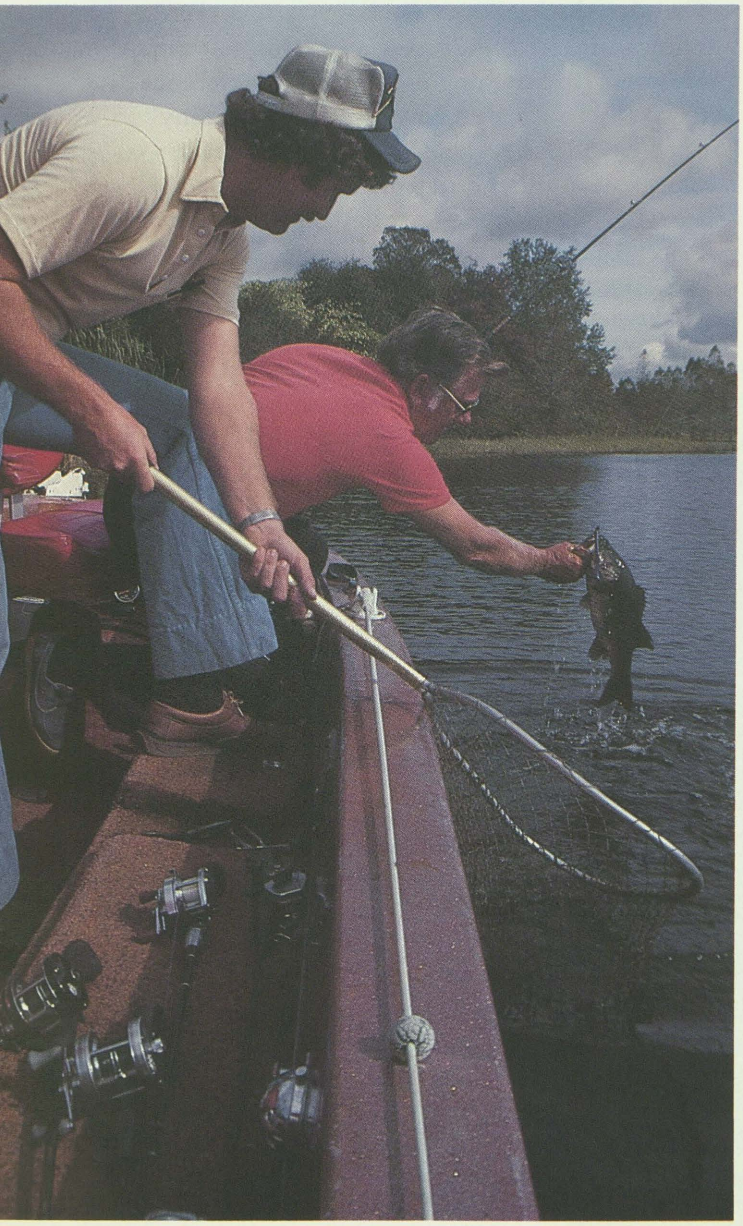
Fishing the still water of early morning lets you see the surface swirling of schooling bass. Once spotted, you must glide up to them slowly or they may dive for deep water.

You don't make very many trips after schooling bass before you realize the importance of "matching the hatch." In the Lake Kissimmee incident, the situation was different, although actually we were matching the hatch. These larger bass were feeding on shad and thus interested in larger lures, and the water was slightly stained after an afternoon rain. Our Rat-L-Traps attracted them underwater with shape, size, and noise.

Many anglers ignore schooling bass, for this kind of fishing is not the normal way to collect wall mounts, although bigger fish often are suspended below the frantic feeders. These big fish lay below the action and eagerly gobble the stunned or injured bait fish slowly sinking from the surface or subsurface melee.

Of course, when you bring your lure down to the depth where the big ones are loafing, you may get a sudden surprise. Jack Westberry did when he landed a six-pounder while we were school fishing. On several occasions I've tangled with four- and five-pounders when expecting smaller bass.

Big fish are the exception, rather than the rule, but many fishermen would call this bass a nice catch.



Big fish are the exception rather than the rule. You find schooling bass range from three-quarters of a pound to two pounds. They're voracious feeders because they're growing fast and need lots of food. But what they lack in size, they more than make up for in fight.

Despite the eagerness with which they'll hit artificial lures, there's more to school bass fishing than just tossing any old lure towards a feeding school. First you have to find them. Geography is a big factor in determining when the bass school. In Florida, schooling usually begins early in June (sometimes in May) and continues through October. Farther north, schooling usually begins late in June and often continues into November.

In planning to seek schooling bass, it's not only important to check the calendar, but also weather conditions. School fishing is best early and late in the day because one of the prime requirements is calm water so you can see the surface action. Sometimes you can locate the schools despite a slight ripple, but forget any idea of school fishing if there's a wind. The bass will school, but you will never be able to locate them.

However, even with a glass calm, it's often difficult to find the feeding schools. If you can determine where the baitfish are, and if you know where the bass have been schooling recently, then that's the area to check out first. But schools move and, if no action develops within a reasonable period of time, then check another area.

Watch for other clues. If you're fishing where there are numerous fish-eating birds, such as gulls, watch when they begin diving. They're diving to pick off bait killed or injured in the melee.

Once you locate a feeding school, don't race in with your big motor wide open. You may arrive in time to get a cast or two, but you're certain to drive the school down. Do this a few times, and the fish will refuse to surface at all.

Smart anglers anchor in known schooling areas, and wait for the fish to surface. If they do move their boat, they do so with electric trolling motors for minimum noise. It requires patience, but this system pays off. If one area doesn't produce, then check out another, but make the final approach quietly with your trolling motor.

One of the most exasperating things about school fishing is being anchored in an area where a school has just gone down, and then see frantic action several hundred yards away. The temptation is to up anchor and chase the action, but don't.

Fishing is one of those enjoyable pleasures where parent and child can share timeless moments together, as Jack Westberry and his son Brent are doing here on a Florida lake.

More than likely, the new action is by a different school. If you remain anchored, the odds are great the first school will again surface, and it'll be a new ball game.

There's another important facet—lure selection. It's a good idea to have at least two rods rigged. On one rod, have a topwater lure, perhaps a propeller type or a shallow-diver. On the other, have a deep-diving or sinking lure. When the action ceases on top, shift from your topwater lure to a deep-diver. Also hold onto your rod, for when you go deep, you often find bigger fish.

For topwater action, noisy plugs such as single- and double-propeller lures—Dalton Specials, Rattlers, Spin-A-Diddee, Devil's Horse, Tiny Torpedo, and similar lures are effective, as well as the deadly minnow types—Bang-O-Lure, Rapala, A.C. Shiner, Rebel, and Cordell. Deep divers such as those made by Rebel, Bagley, Cordell, Heddon, Bomber, and Mann, produce as do fast sinkers such as Gay Glades, Sonar, Rat-L-Traps, Little George, and SpinRite, as well as small spoons such as Eppinger, Cleo, Hopkins and similar lures.

Color is important. Because the school fish usually are feeding on shad or similar light-colored baitfish, lures should be either silver or white. Dark colors usually aren't productive.

Another factor is line. In the majority of situations, you will do better with lighter lines. Most of the time, school fishing occurs in clear water, and the fish can see a heavy line. There's generally no need for hefty line, for school fishing occurs in open water. They're seeking baitfish, which prefer open water. As a result, you're usually fishing snag-free water. Also, remember school bass usually average less than two pounds, and in open water you can handle such fish with six-and eight-pound test lines. It may take you a little longer to put them in the boat (don't forget to have a net along), but that's part of the thrill.

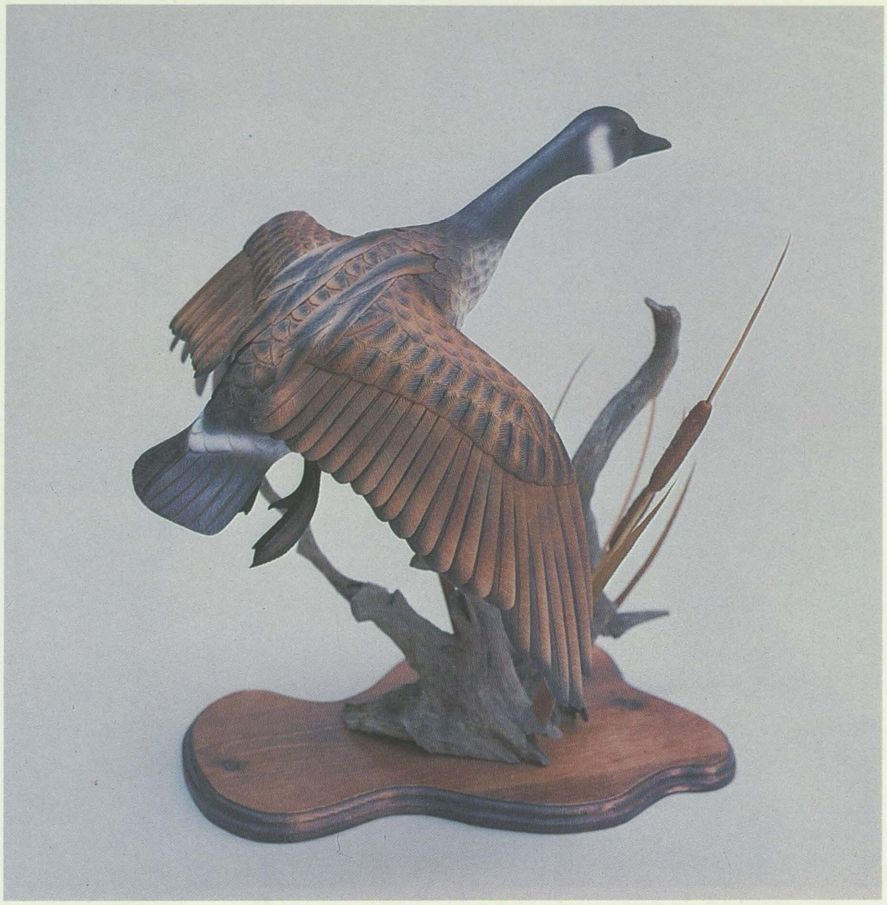
One other thing, make certain you know what fish your body of water contains. If it has been stocked with stripers or sunshines, or has a native population of white bass, don't be surprised if you catch a mixed bag. On Lake Seminole, the premier fishing hole on the Florida-Georgia line in the panhandle, for example, you can expect to catch black, white, sunshine and striped bass from the same school. In Lake Talquin, don't be startled if a striper hits your lure tossed at schooling black bass.

Keep school bass fishing fun by using common sense. If you haven't sampled school fishing, try it. The action's guaranteed! ☐

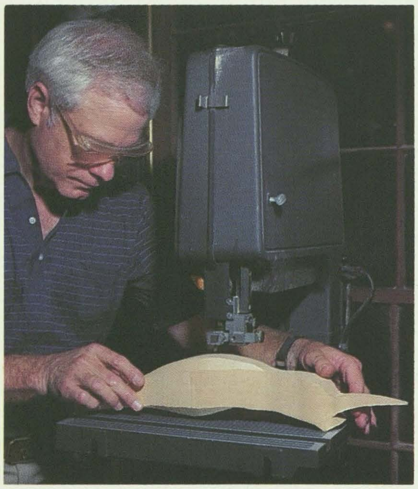
Wooden Flight

Text and Photographs By
John Waters Jr.

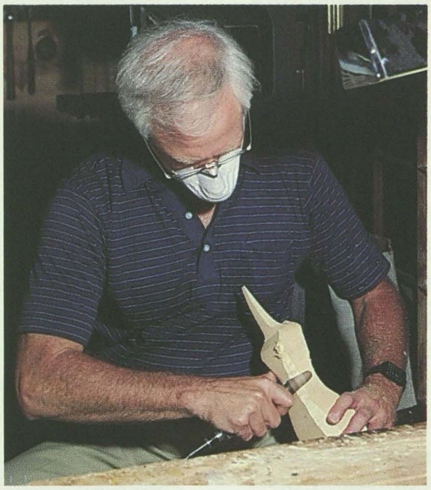
Tallahassee's James E. Owens was involved in the training and practice of dentistry for nearly 20 years before he became interested in sculpting life-like birds from wood. He began by taking an evening course in wood carving at Tallahassee



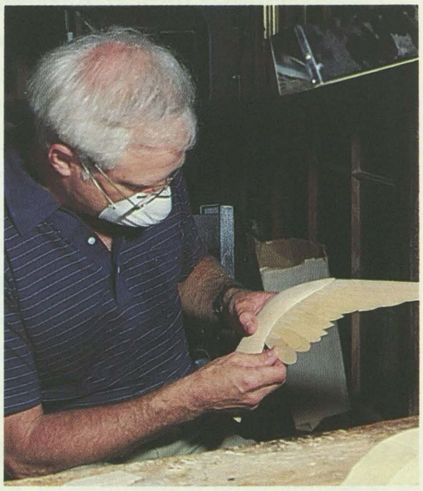
Canada Goose and Cattails



Owens first constructs a paper pattern, taking great care to maintain a natural scale and shape. After transferring the pattern to a block of basswood, he then roughly shapes a body from the block on a bandsaw. This block will become a skimmer.



After the body is roughly shaped, Owens uses a rough rotating burr to round off the angled edges left by the sawing. Initial shaping of the body and wing forms is done this way, then smoothed with a much finer burr and by hand sanding.



The main wing forms are slotted along their trailing edges to provide space for individually shaped feathers of thin basswood veneer which precisely fit the wing body. The wooden feathers appear life-like and have some flexibility.

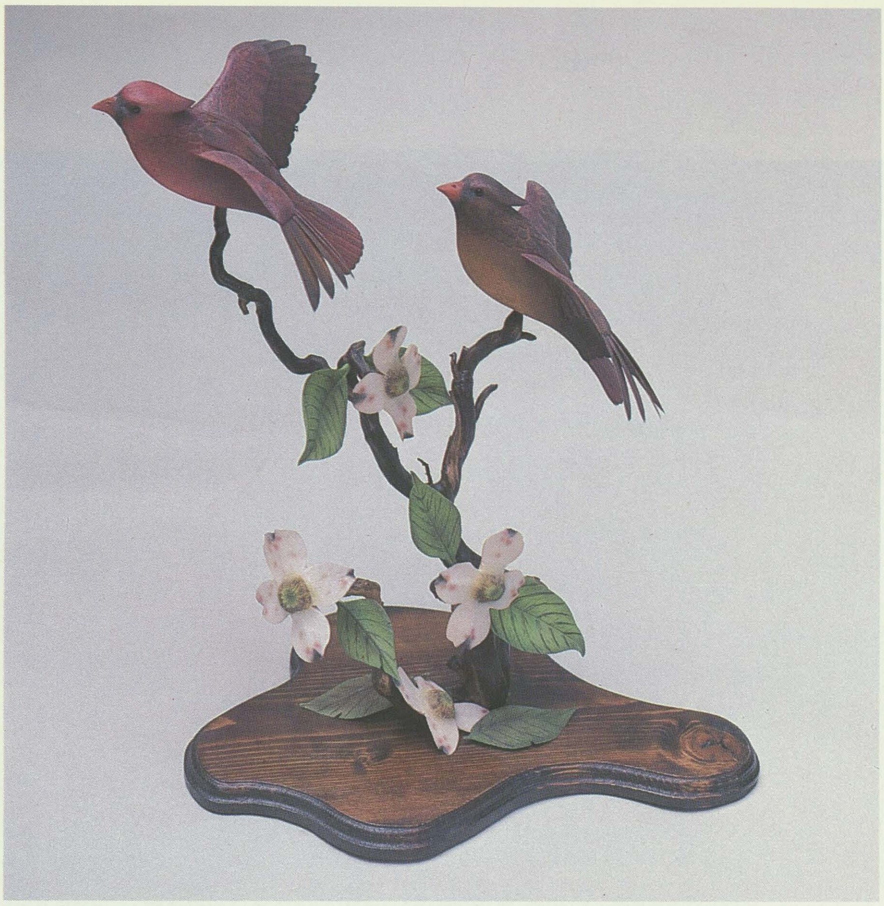
Community College.

"After I got involved in working with wood," he explains, "I decided that's what I would rather be doing."

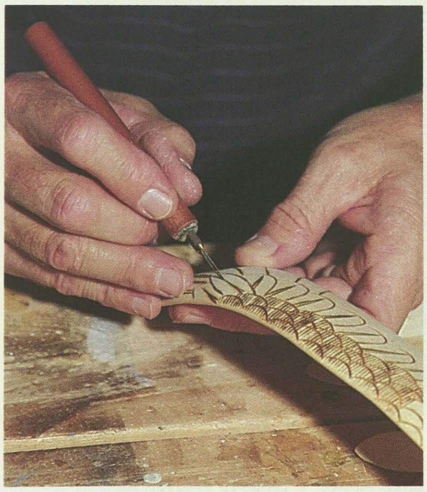
So, Owens changed his daily life pursuits to sawing, grinding, shaping, carving, modeling and contouring American hardwoods instead of human teeth. Many of the techniques he had perfected in dentistry were well-suited to sculpting wood in the style he chose to perfect.

Now in his second full-time year, his works have been well received by collectors from all over the country. He has been awarded three Best of Show recognitions in Florida art shows at Tallahassee, Bartow and Ocala, as well as numerous other awards. His show displays are dazzling, and viewers stop to study them intently.

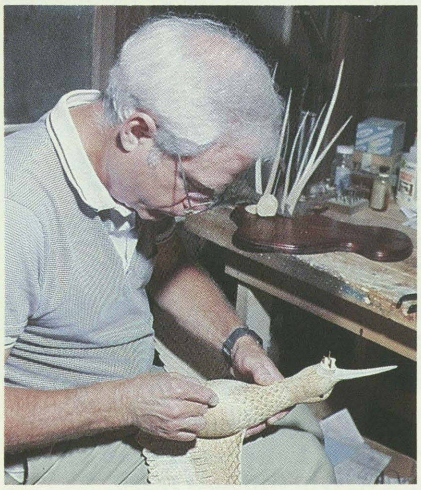
The materials he uses include ▷



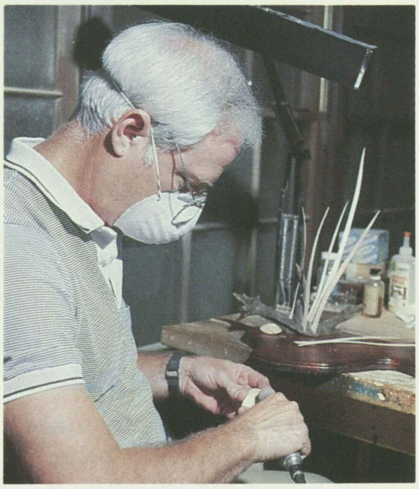
Northern Cardinals with Dogflower Blossoms



Feather-like patterns are carved into the wing bodies by using several woodburning points. Sometimes cutting tools or knives are used as well. This technique gives each wing a character that blends nicely with the long flight feathers.



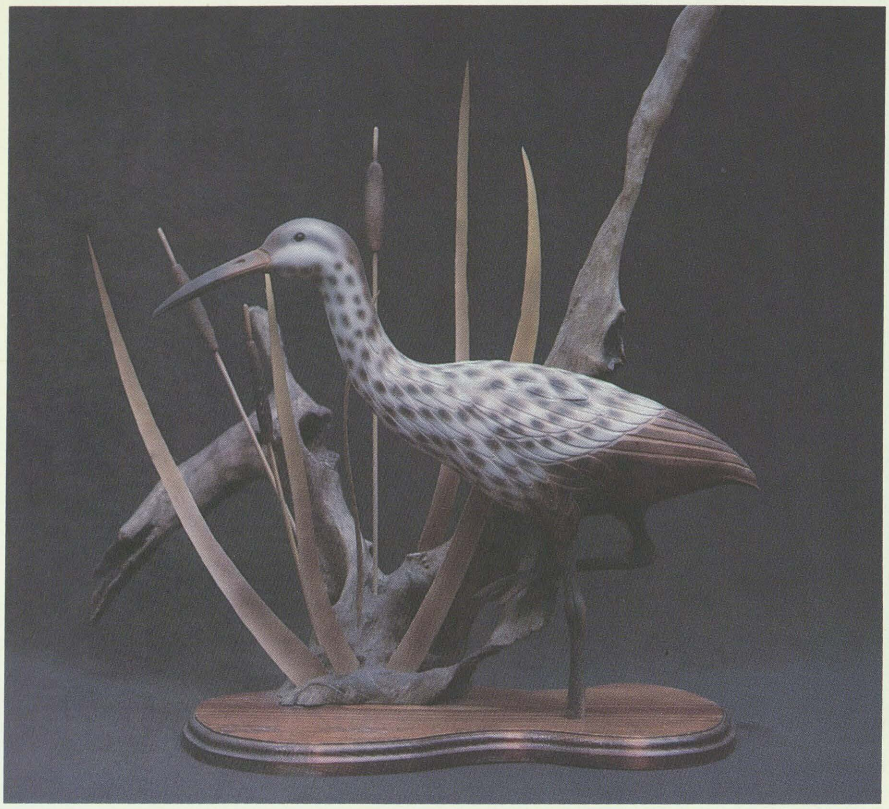
After basic parts of the wings and body are individually sculpted, Owens carefully checks their alignment to each other. Adjustments are made so the wings fit the body in a natural attitude. Metal pins and glue will hold them together.



The base is last to be finished, but gets just as much care. Owens' work is characteristically shown in a habitat setting. Here, cattails and seashells are added. Other works might have flowers or similar objects, all sculpted of wood.

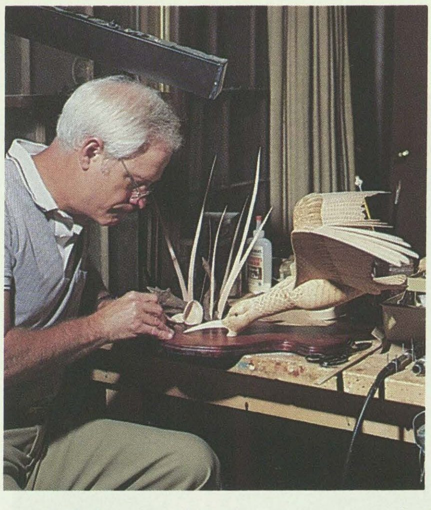
American basswood, American holly and other woods which have the hardness and very fine grain he seeks. The wood arrives as large solid blocks or thin veneered sheets, and must be worked for many hours before taking on the shapes of the flying ducks, gamebirds, songbirds or wading birds in which he specializes.

When Owens finishes, much of the fine detail of feathers, muscles and postures of the real birds is captured in wood. For large birds, he sculpts smaller scale models, but for small birds, they are sculpted life-size. All his works are individually created, and the lucky owner who acquires one always gets a personal note on the bottom of the base signed by Owens. ☐

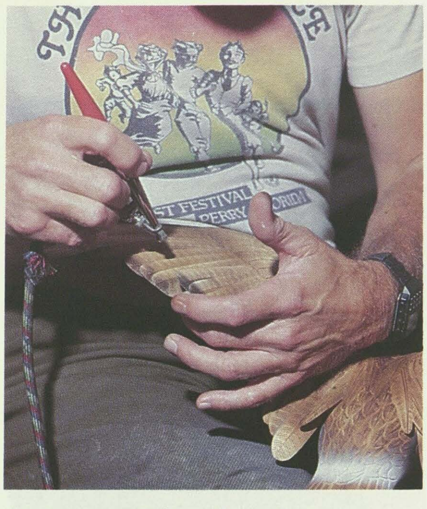


Limpkin With Cattails and Swamp Wood

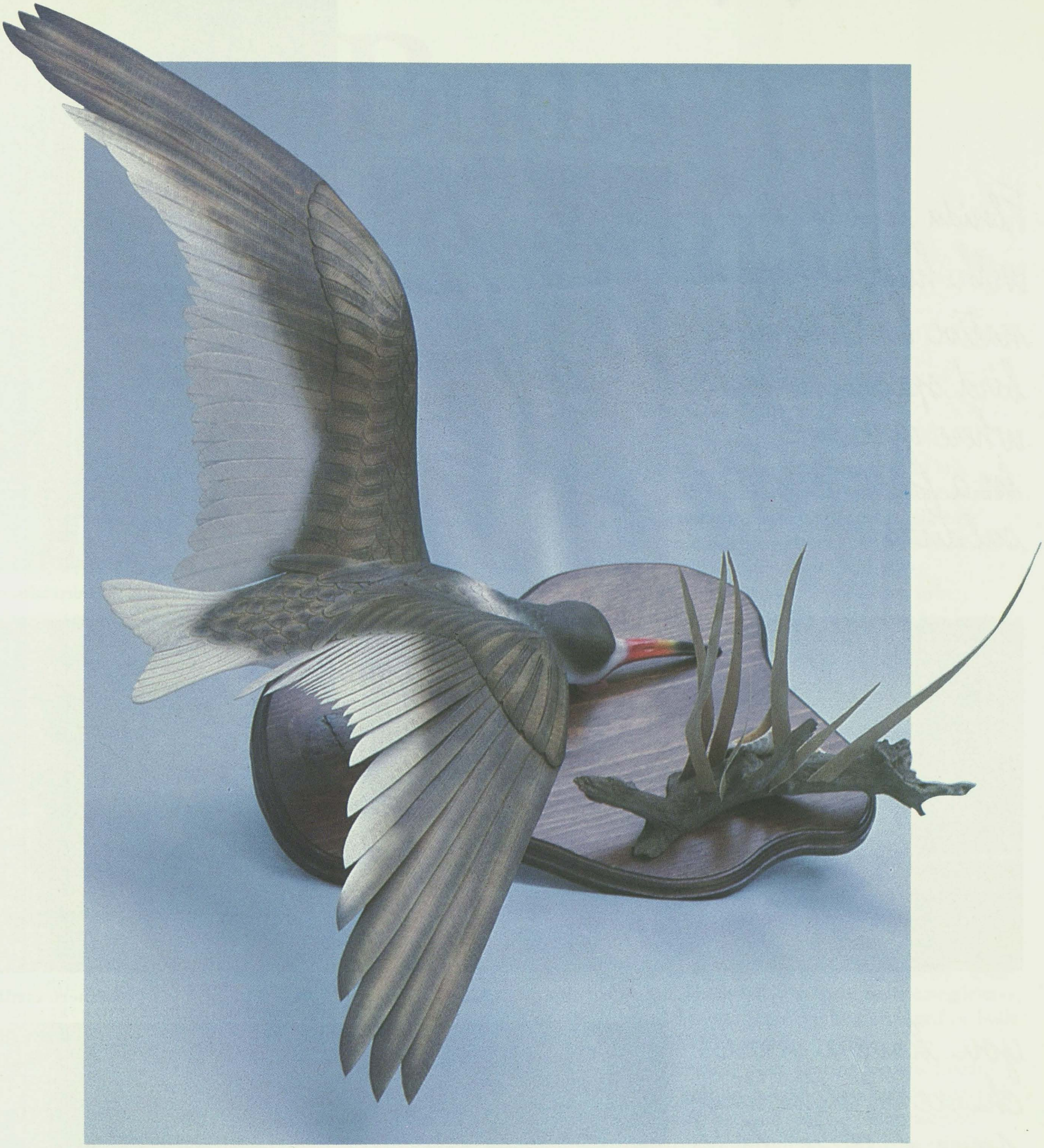
All the parts are carefully made to fit without the joints being visible, before the sculpture is mounted permanently to the base. Here, Owens checks the nearly finished work to be sure it will be strong when mounted to the base.



Invisible metal rods run through the hard, holly-wood beak of this nearly finished black skimmer down into the solid wooden base. After this final check, the still unglued parts are disassembled for final gluing and permanent assembly.

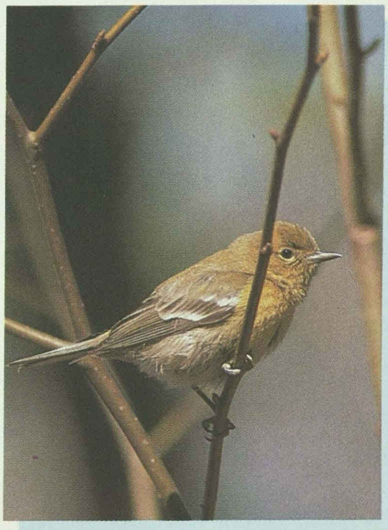


Using an airbrush and various paints, depending on the species sculpted, Owens finishes each bird in paints which match its natural colors and, as a final touch, gives some of the feathers a sheen. The finished skimmer is shown at right.

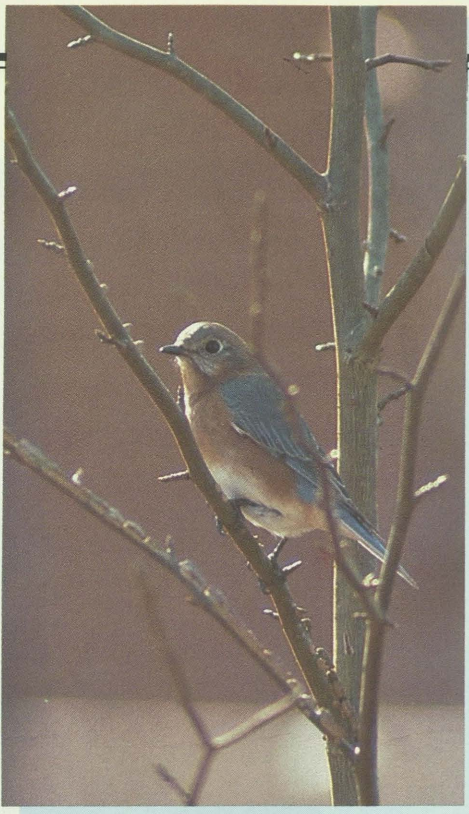


Black Skimmer, sculpted by James E. Owens

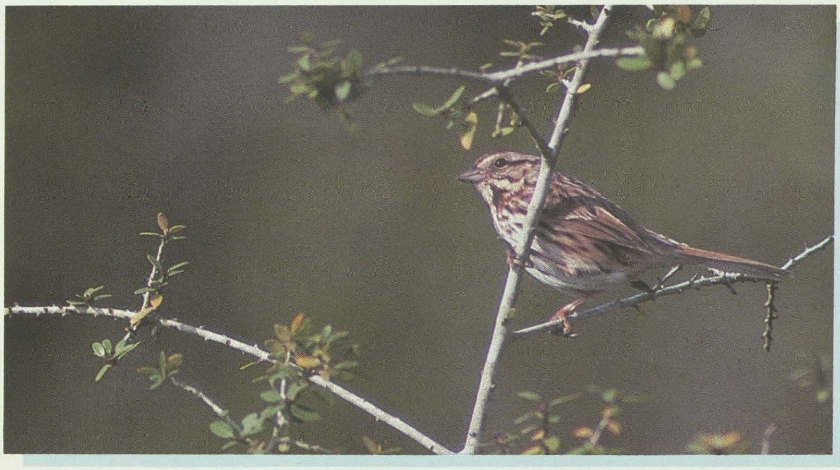
Florida is blessed with hundreds of native and migratory bird species. No matter where you live, in a forest or a subdivision...



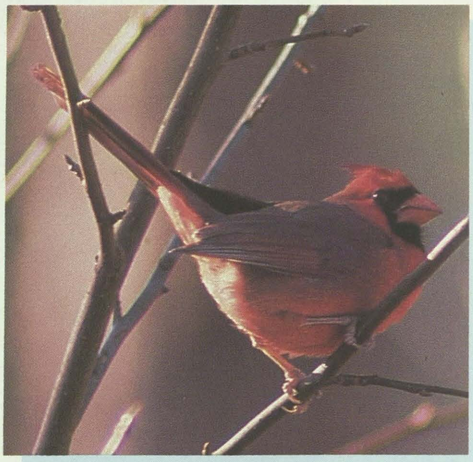
Pine warbler



Eastern bluebird

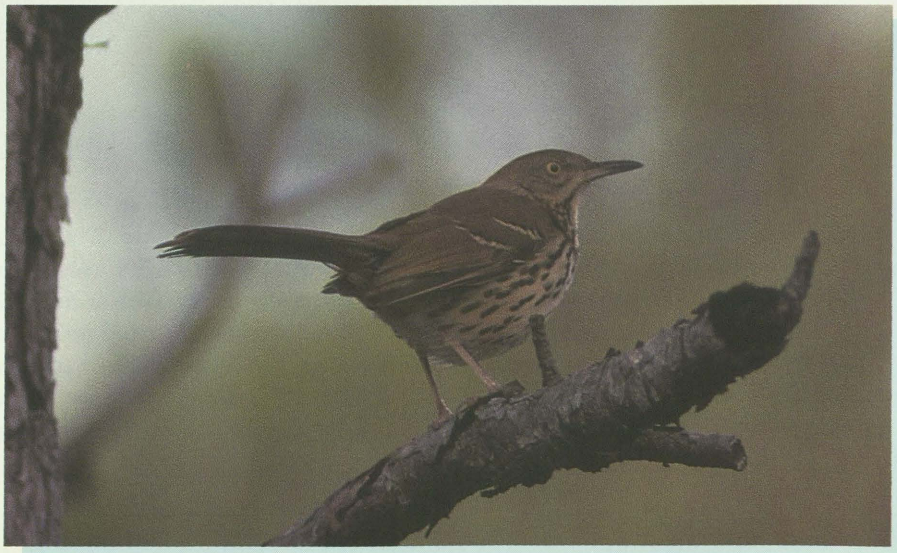


Song sparrow



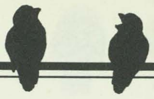
Northern cardinal

you have a good chance of attracting some of these birds to your yard by following a few simple steps.



Brown thrasher

Bird photographs by James C. Greene



BIRDS IN YOUR BACK YARD

By John Waters Jr.

With one of the coldest winters in Florida's history now trying to transform itself into spring, the annual migration of many North American bird species is going on. Those southward-bound birds that passed through Florida last fall, ahead of winter's bitter cold fronts, included many that were mere eggs earlier in the year. Now those that survived their long journey, and the weather, will migrate again—this time in full, splendid adult plumage.

Many birds mature at their winter resting grounds. There, they begin to develop their most showy breeding feathers in response to such environmental cues as increasing day lengths. Their return spring migrations thus are more beautiful than their fall and early winter flights.

Migrating birds use considerable amounts of energy on their journeys, which can measure hundreds of miles. Some individuals winter in South America, but return to the northern regions of North America to nest and begin new families in spring or early summer. The long northward journey leaves some of them exhausted, and easy prey to predators. To meet their daily energy needs for flight and survival, food is an absolute necessity.

Satisfying their hunger is one way you can enjoy many birds in your yard, while helping them to survive. By placing feeders and food outside your home, you can enjoy visits from these little feathered friends that will rival any nature program you've ever watched on television.

Florida is blessed with some 500 bird species, if all the native, accidental, migratory and rare ones are counted. You could spend a lifetime, with identification guides and binoculars in hand, just learning all their names—from hummingbirds not much larger than a bumblebee to large, majestic hawks and owls.

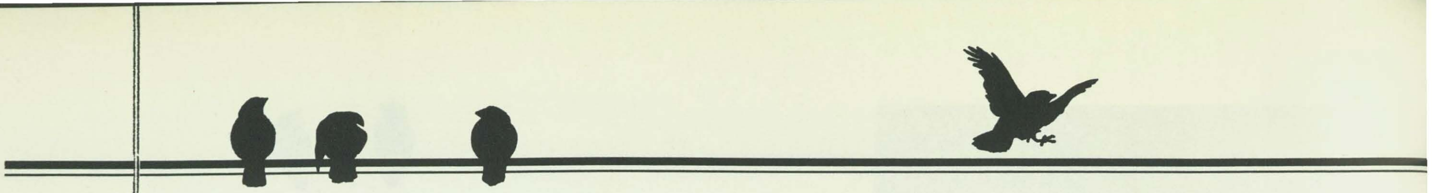
No matter where you live—in a forest, an urban subdivision, on the waterfront or in an open field—you have an excellent chance in Florida of seeing birds, and an even better chance if you feed them. A wide variety may even choose your yard as their family rearing site if food, water and adequate shelter are available.

Although birds feed on a multitude of plant and animal materials, a few basic, readily available foods are universally liked. Wild birdseed can be purchased at most supermarkets and gardening centers. Other favorites are beef fat (suet), which can be obtained inexpensively at any meat market, and ordinary peanut butter—crunchy or smooth. Dried, frozen and fresh fruits, nutmeats and bakery goods are also treats to birds. All these foods will attract and nourish them.

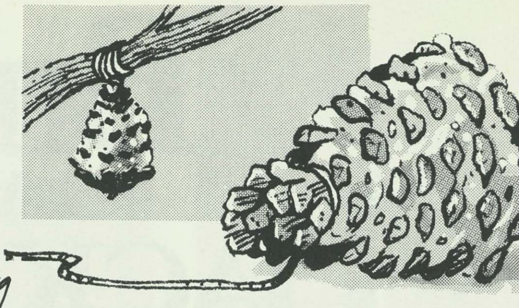
Each of these foods requires its own special but simple dispenser. These fall into three basic categories—baskets, tubes and trays. They can be purchased or built of simple materials. Keeping the food dry is an important consideration when placing feeders. Seeds, for example, may germinate or become moldy if rained on and bakery goods become soggy. It is important, especially when feeders are unprotected from rain, to fill them only as fast as they are emptied.

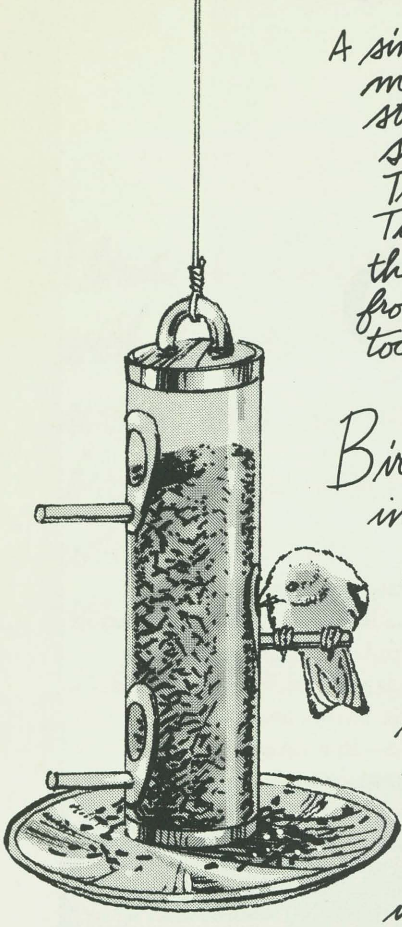
Suet is best made available by placing it in a little basket or mesh bag—either store bought or a simple do-it-yourself one of ordinary ½-inch hardware cloth. ▷

With just a few tools, several feet of wood, and some ingenuity, you can shelter, bathe and feed birds migrating through your area.



A simple feeder can be made by rolling a sturdy pine cone in suet or peanut butter Tie it to a tree limb. Tie the cone close to the limb to keep it from swinging or wobbling too much.





Bird feeders can vary in form from commercial feeders designed for specific birds to simple homemade feeders such as the one below. Note the spacing in the side rails. These spaces allow easy cleaning and "spillage" of excess seeds for ground feeding birds.

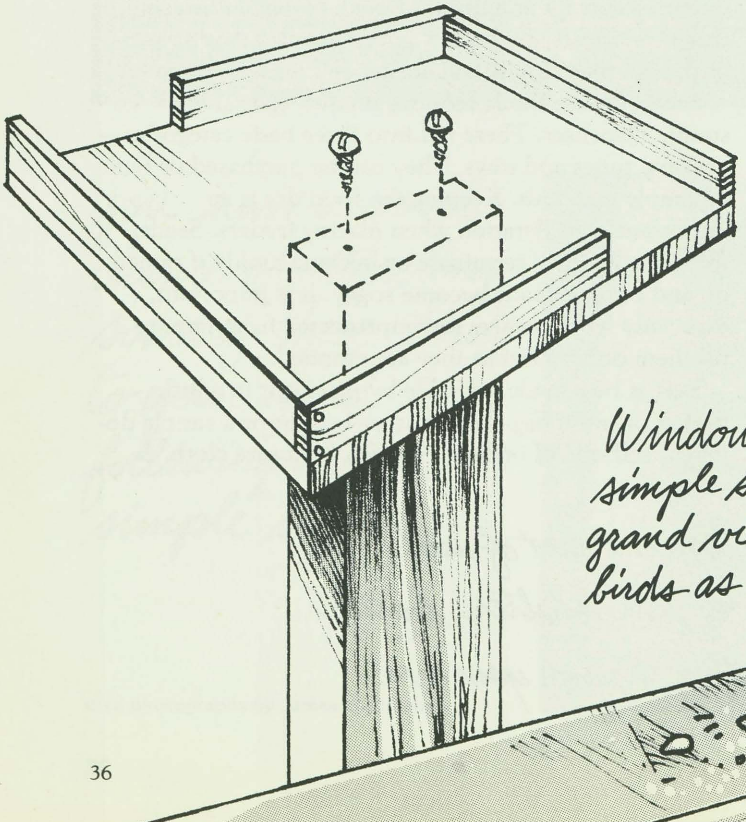
Putting suet in a basket keeps greedy birds, such as blue jays and grackles, from grabbing the whole pile and flying away with it. By putting it in a basket, birds can get at it—but only in small bites. The best suet is from inside the loin, as it is more flaky in texture.

Peanut butter feeders can be as simple as a pine cone or a short length of a four- to five-inch diameter log with a few one-inch holes bored in it. They can be attached to a tree just outside a window, or even hung from a wire tied to the clothesline or under the roof's edge. Peanut butter is also liked by flying squirrels. Look for them at night.

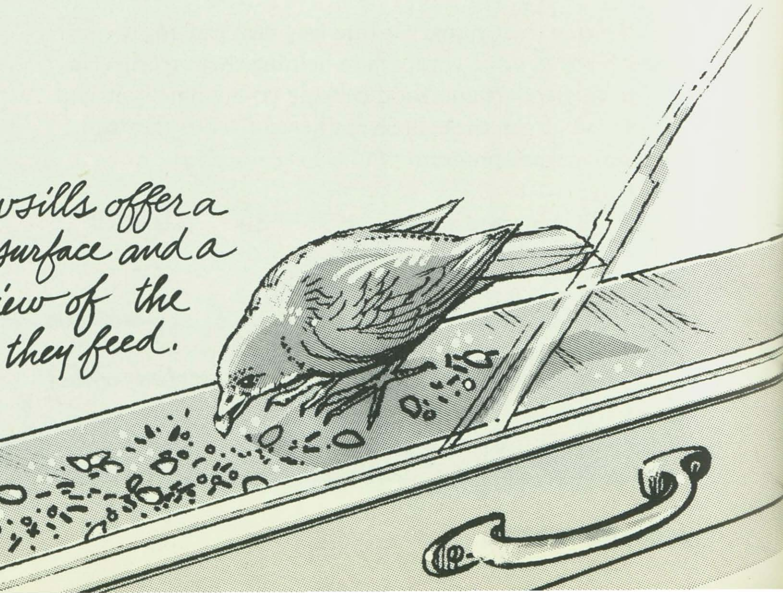
Most of these bird foods are also eaten by gray squirrels. If you don't want squirrels, use feeders that are squirrel-proof or have squirrel guards. In many neighborhoods, oppossums, raccoons and other wildlife may be attracted to suet, bakery products and peanut butter, especially if it is available at night.

If you live in an apartment, all these foods can be placed outside on a windowsill. If you have trees and a yard, your trees can become food stations. The greater variety of foods and the more feeding stations, the more birds you can expect.

Water is also a great attractor for birds. A simple birdbath can bring birds to your yard that otherwise might pass it by. Water should be kept clean. Daily flushing and refilling a birdbath with a garden hose can accomplish this, but if you have a propensity for backyard building projects, dripping water works even better. The weekend handyperson can build an attractive little pool with its own slow-drip water



Windowsills offer a simple surface and a grand view of the birds as they feed.



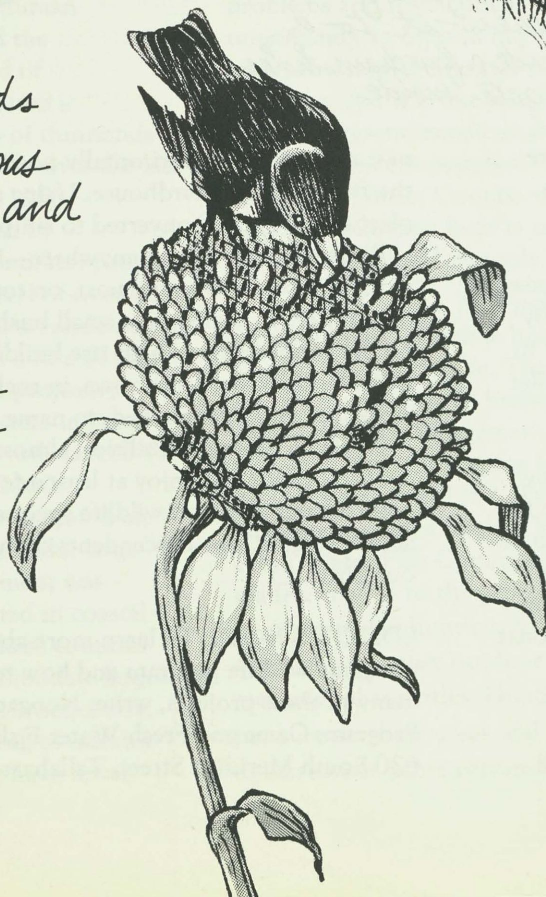
supply. Nearby shrubs and a few rocks will provide convenient perching places.

Another thing birds respond to is shelter. When bare yards are compared to tree- and shrub-filled yards, there is a great difference in the numbers and kinds of visiting birds. To make an instant transition from bare to better, pile tree trimmings in the corners of your yard to create some brush piles. Birds naturally like to perch in areas that offer at least some form of cover.

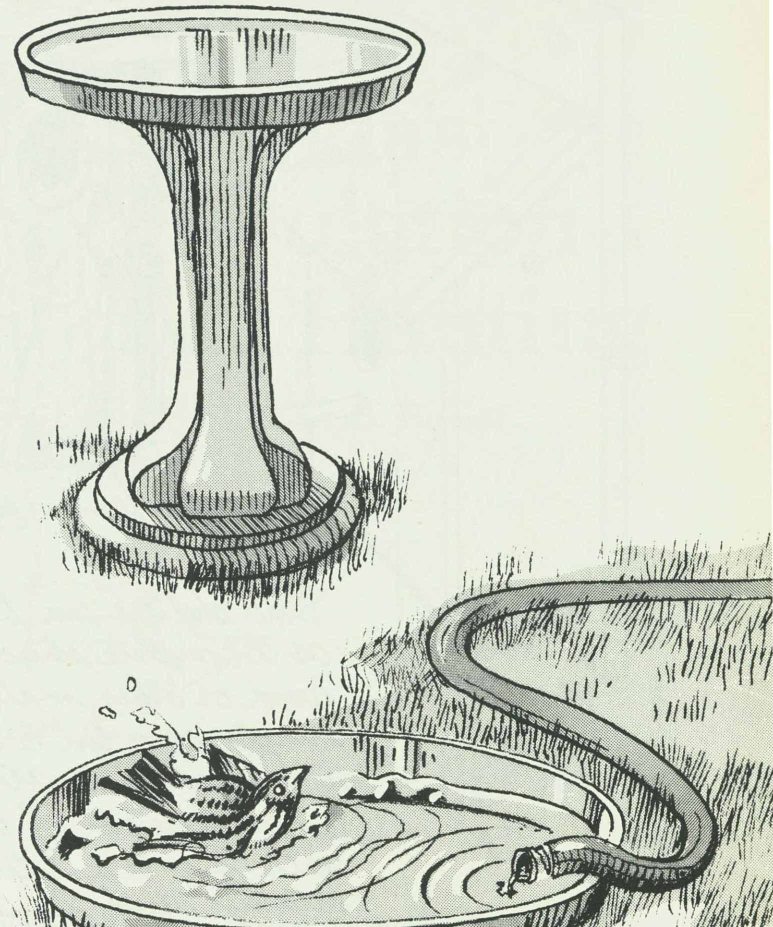
For future years of enjoyment, plant trees and shrubs that are beneficial to birds. Some of the best trees for the northern half of the state are dogwood, holly, wild black cherry, pyracantha, elderberry (especially good for sunny wet zones), oaks, wild plum and hawthorn. In south Florida, beneficial trees include red mulberry, dahoon holly, several varieties of "stoppers" and pidgeon plum. Wax myrtle and native palms grow throughout the state, as do evergreens such as pines and other conifers which also can be planted to provide food and cover.

These plants provide the bonus of having spectacular blooms or foliage to add even more pleasure to your home environment. Their fruits or berries are not only favorite natural bird foods, but also are beautiful.

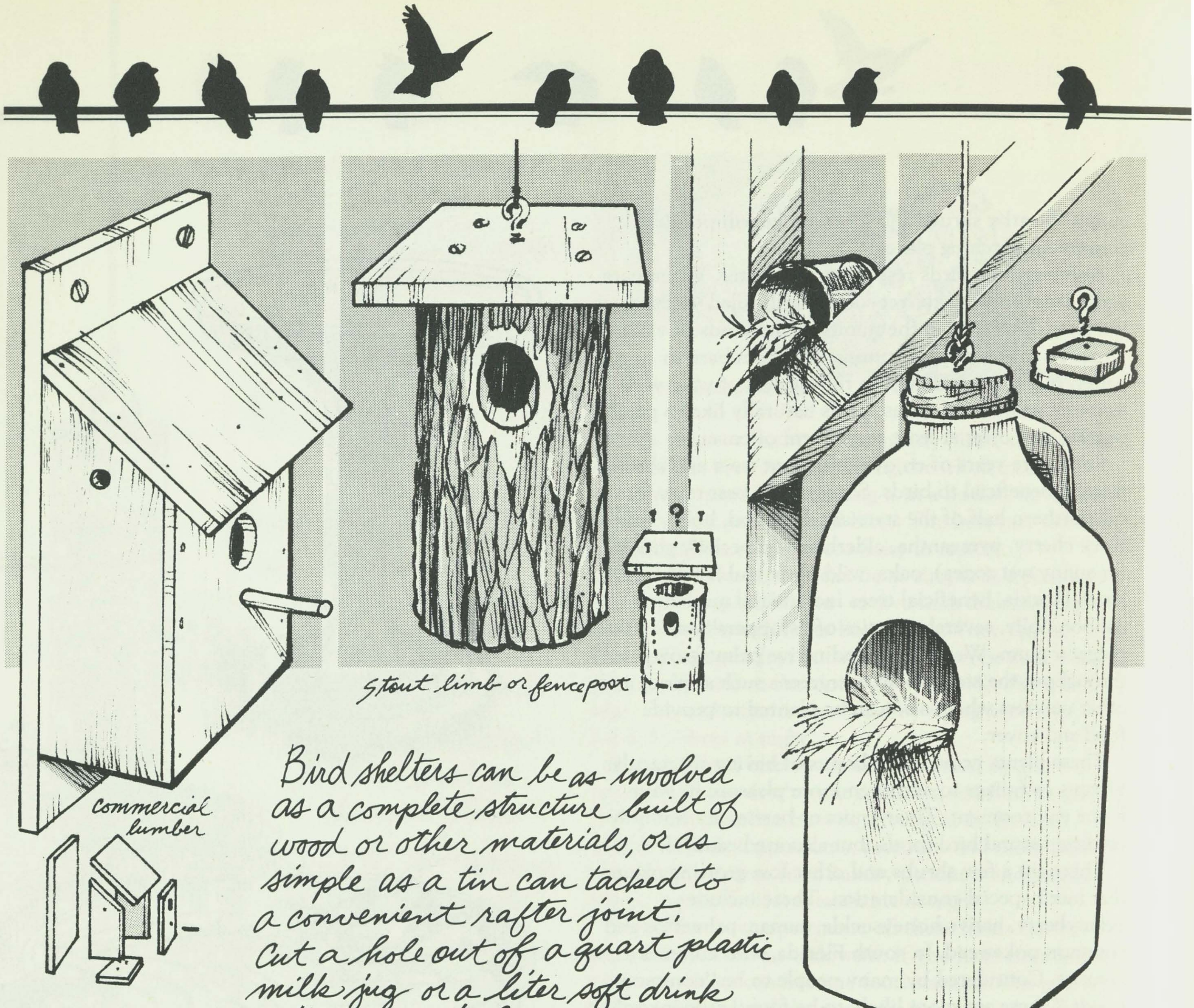
There are a few shrubs and other low-growing plants that merit special consideration. These include beautyberry, native honeysuckle, sumac, palmettos and common pokeweed. In south Florida, wild coffee is a favorite. Considered by many people to be "common weeds," these are more likely to be found growing wild ▷



Planted foods such as various berry bushes, and grain and seed plants such as sunflowers, also attract birds.



Birdbaths come in classic pedestal models, as well as many contemporary designs, but they can be easily improvised. Something as simple as a clean trash can cover and a slowly dripping garden hose can do the job.



Bird shelters can be as involved as a complete structure built of wood or other materials, or as simple as a tin can tacked to a convenient rafter joint. Cut a hole out of a quart plastic milk jug or a liter soft drink container and hang it from a tree limb or screw it to a tree trunk. Provide a few drain holes in case rainwater gets inside.

than in commercial nurseries. If you own land where these plants are growing naturally, you may wish to encourage them to grow for the birds.

A third birdfood group is the annuals, especially sunflowers and millet. Seeds for these can be purchased at feed stores and at many garden shops. If you enjoy growing them, it's easy enough; but, it's even easier to buy commercially mixed wild birdseed in which millet and sunflower seeds are usually main ingredients.

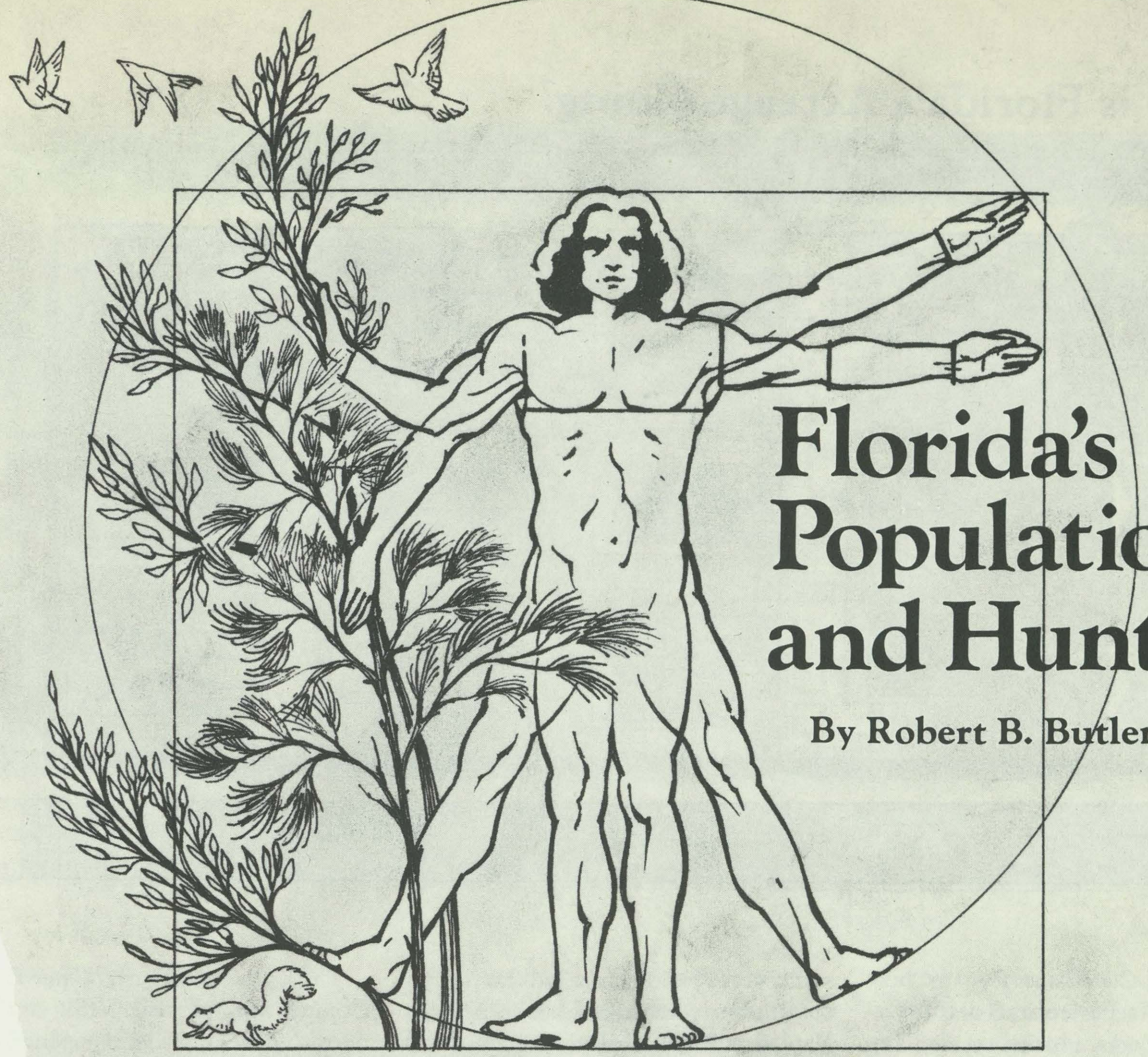
If you are handy with wood and other carpentry materials, you might want to build birdhouses. Many styles can be fashioned using only a hammer, saw, a few nails and a little standard lumber. You don't have to be a skilled carpenter to build houses that will provide shelter for egg laying and rearing of young, and if you have children to help, these projects can be educational as well as fun.

You can even make a few birdhouses from such simple household items as tin cans and plastic jugs. Many small but delightful species such as wrens will nest as readily in a horizontally-positioned tin can as in the finest wooden birdhouse. Using a sharp knife, plastic jugs can be converted to simple birdhouses.

Birds will nest almost anywhere—in hanging plants along a porch or open carport, on top of junk stored over rafters in a shed, in a small bushy tree, in hedges, on the windowsills of high rise buildings, in holes in trees, along bushy fence rows, in rock piles or in grassy areas that don't get mowed, to name a few.

Given all these possibilities, almost anyone can attract, benefit and enjoy at least a few of our most colorful and common wildlife species—the joyful, active, singing, tiny descendents of mighty dinosaurs—our birds. ☐

EDITOR'S NOTE: To learn more about Florida's nongame wildlife program and how to get started on many of these projects, write: Nongame Wildlife Program, Game and Fresh Water Fish Commission, 620 South Meridian Street, Tallahassee, FL 32301.



Florida's Population and Hunting

By Robert B. Butler

Florida's rising human population and the resulting spread of urbanization have caused a deterioration or loss of thousands of acres of wildlife habitat over the last three decades. Since 1950, population has grown by approximately eight million people to the present day level of over 10 million. Presently, new residents are arriving in Florida at a rate of some 6,000 per week, and projected growth data for the state indicate Florida's population will exceed 15 million by the year 2000.

Until the construction of Walt Disney World in Orlando, large-scale urban development was primarily concentrated in coastal counties. Many of these counties will no longer accommodate large-scale development; consequently, developers are moving to interior counties where they have fewer problems and restrictions. The opportunity to hunt in many of the highly developed counties is rapidly declining, and will not exist in the future if present trends of growth and development patterns continues. Pinella County, where the opportunity to hunt is no longer available, is a good example.

There has been a 73.4 percent increase in use of public hunting areas in the last decade. The percentage of licensed hunters using Type I wildlife management areas increased from 29 percent in 1972 to 48.5 percent in 1982. Type I areas are managed by the Game and Fresh Water Fish Commission and made available to the general public, by permits, for hunting, fishing, camping and other outdoor recreational activities. Hunting pressure on these areas will continue to increase as more private lands are converted into service-oriented uses.

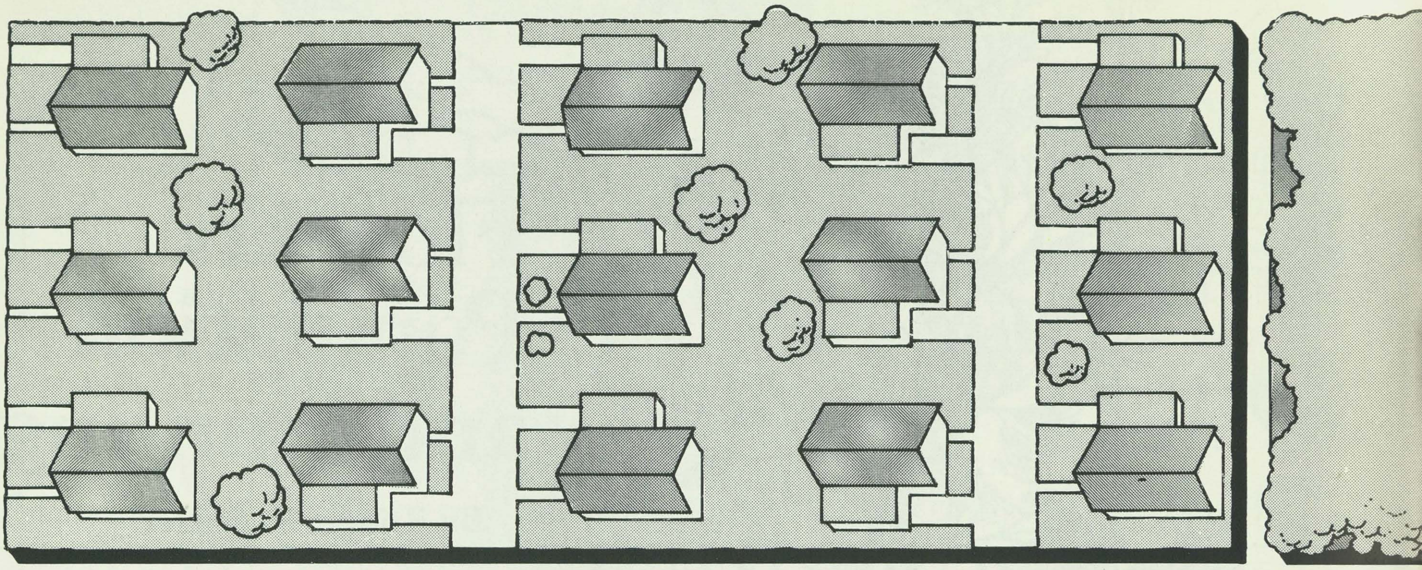
As hunting patterns change, wildlife managers are forced to alter management strategies to regulate hunting and manage wildlife resources. Future needs of both hunters and wildlife resources must be anticipated, and efforts need to begin to prepare for meeting those needs. There is no crystal ball that will provide the answers, as in the real world; only projections can be made.

Critical to the perpetuation of viable wildlife populations is an availability of suitable habitat. While an abundance of habitat still exists in Florida to support wildlife populations for most species, in recent years, urbanization has caused many acres to be used for development of housing, business, roads and other land-using projects.

Orange County Agricultural Extension Agent Harry F. Swanson, ▷

Where is Florida's Acreage Going?

Each 10,000 new Florida residents need 2,187 acres of land for living, says Orange County's Henry F. Swanson in his book, *Countdown for Agriculture.*



1,000 acres for residential land

in his book, *Countdown for Agriculture,* has calculated that for each 10,000 new Florida residents, 2,187 acres of land is needed. He breaks this figure down as follows:

Retail and Service Land	**109 acres**
Parks and Other Public Land	**580 acres**
Residential Land	**1,000 acres**
Public Streets	**400 acres**
Industrial Land	**98 acres**

In 1958, Florida had 1.1 million acres of developed land. By 1977, this had increased to 4.9 million acres. If the trend continues at this rate, 6 million acres of Florida could be developed by the year 2000.

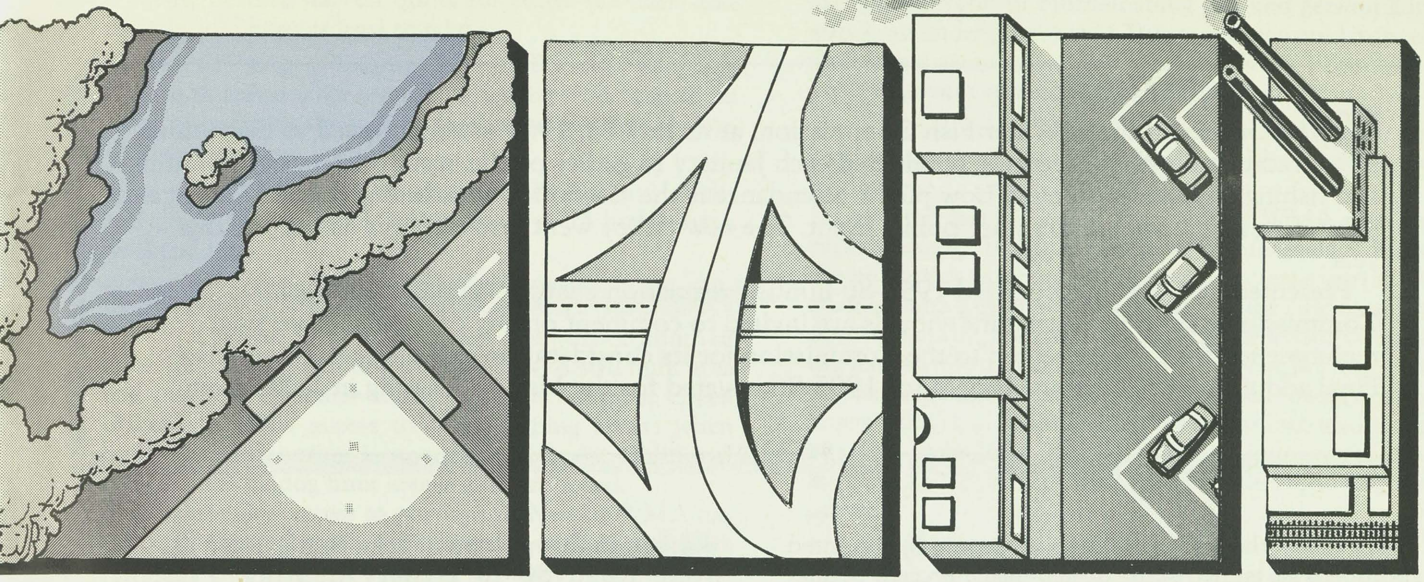
Because of human population growth, the state's forested lands have decreased by 5.5 million acres (26%) since 1950. This loss was primarily due to agricultural and urban land use. From 1970 to 1980, 451,300 acres were lost to agriculture and 546,300 acres were lost to urbanization.

Southeast Florida is the most populated region and the Tampa-St. Petersburg region is the next most populated area of the state. By the year 2000, it is predicted, the southwest Florida coast will be continuously urbanized between Naples and Crystal River, and the area on either side of Interstate 4 between Tampa and Daytona Beach will also be completely urbanized. Developers who like to build on a large scale find this is no longer possible in counties such as Broward, Dade, Palm Beach, Pinellas and Sarasota. Pinellas County already has 2,748 inhabitants per square mile. This leaves very little room for any large-scale development.

As large-scale development moves to the interior counties, privately owned lands that are suitable for wildlife will be converted to nonwildlife uses. One result will be that sportsmen who have historically hunted on private lands will increasingly become affiliated with hunting clubs which have suitable hunting areas leased to accommodate their members. In most instances, tracts of land leased by hunting clubs are open only to club members, which represent far fewer hunters on an area than could be accommodated; therefore, these lands are not being used to their maximum capacities.

The Game and Fresh Water Fish Commission, in anticipation of the need to have more lands opened for public hunting and other outdoor recreational activities, embarked upon a private land leasing program several years ago. As funds were insufficient for the purchase of adequate tracts of land, the Commission leased land areas from timber companies and private landowners throughout the state. The landowners were willing to allow the Commission to manage their land as a wildlife management area, and open to the general public areas for hunting.

In recent years, as hunting areas have become increasingly scarce, these wildlife management areas have become more popular and we have felt a supply and demand impact. In addition to these management areas becoming crowded, many landowners are withdrawing their lands from public use, and instead, leasing their land to private hunting clubs that are willing to pay as much as $2.50 per acre for exclusive hunting rights on the land. The Commission appropriation, in contrast to this, averaged 37 cents per acre during



580 acres for parks and other public land

400 acres for streets

109 acres for stores and services

98 acres for industry

the 1982-83 hunting year.

Despite a population increase of 300,000 people each year, sales of Florida hunting licenses have remained almost constant over the last ten years. During this decade, almost 3 million new people, of which some 92 percent are migrants, joined the existing population. During the same time, however, sales of Wildlife Management Area Stamps have increased steadily, from 72,657 in 1972-73 to 125,992 in 1982-83. This increase amounts to 73.4 percent more hunters using public hunting areas during this ten-year time.

In some of the projected big growth areas, private hunting areas are predicted to disappear completely. Accordingly, there will be a greater necessity for quotas to be assigned to the remaining public hunting areas where quota hunts have already been assigned to prevent overcrowded and unsafe conditions. Each year, a larger number of public hunting areas reach their assigned quota. As a result, the number of quota hunt applications that must be rejected increases.

In many instances, hunters travel several hundred miles to hunt on public hunting areas, particularly from the highly developed counties. In 1981, for example, 117 quota permits were issued to Broward County residents to hunt Ocala Wildlife Management Area. The same year, there were 101 permits issued to Dade County hunters for Ocala Wildlife Mangement Area. Apalachicola Wildlife Management Area had 157 permits issued to Hillsborough County hunters.

There are regional differences in the state's population and availability of public hunting lands. The northern regions have less population density, and consequently, more forest lands and wildlife management areas. The South Region, however, contains 27.1 percent of the population, but has only 4.2 percent of the Type I wildlife management area lands. In contrast, the Northwest Region contains 8.5 percent of the population, but has 26.8 percent of the public hunting lands.

Over the next 20 years, the South, Central and Everglades regions are projected to absorb the major portion of Florida's growth, and by the year 2000, it is predicted that these regions will have 90.9 percent of the state's population. The remaining 32 counties in the state will contain only 9.1 percent of the people, and if the distribution of Type I wildlife management lands remains unchanged, 48.6 percent of these will be in these counties of lower population density.

The Game and Fresh Water Fish Commission is energetically involved in these problems, and active in managing lands for hunting, fishing and other recreational uses so that the greatest possible number of Floridians who want to use these lands can do so. Towards these goals, the Commission is coordinating its efforts with other state and federal agencies as well as cooperating landowners. In the process, new sources of funding are being considered, and ways of increasing wildlife productivity without adversely impacting the land and the owners' intended uses are being implemented as part of the ongoing activities of wildlife and fisheries management. What is also needed is awareness and support of these efforts from the general public. □

PROPOSED 1985-86 HUNTING REGULATION CHANGES

The Game and Fresh Water Fish Commission, at its July 13, 1984 meeting, voted to discontinue traditional public meetings, conducted each January to gather public input on proposed hunting and fishing regulation changes. Low public attendance is the reason for abandoning the old format and instituting a new format to gather public input. The new policy went into effect in January of this year.

Presented here are the proposed 1985-86 hunting regulation changes, as prepared by the Commission's staff. Interested individuals are invited to comment on any of these, before final recommendations are presented to the Commission for its consideration at the March 8, meeting. Final adoption of regulation changes for 1985-86 is slated for the May 10 meeting in Tallahassee.

1. Allow the sale of lawfully acquired mounted specimens or tanned skins of mammals: Present regulations do not recognize that skins or trophies of furbearers or mammals which are protected in Florida may be lawfully acquired and their sale would not affect protection.

2. Allow antlerless deer taken under permit to be possessed in excess of established bag and possession limits: This action exempts those antlerless deer taken under permit from the Commission from the bag and possession limits which apply to those antlerless deer taken during established "antlerless deer days" and either-sex deer hunts.

3. Open nonmigratory hunting season on the third Saturday of November and adjust the closing dates accordingly: The hunting season for 1985-86 would be:

Deer and Wild Hog—November 16, 1985 through January 26, 1986 in Northwest Region.

November 16, 1985 through January 12, 1986 in other regions.

Fall Turkey—November 16, 1985 through January 12, 1986.

Spring Gobblers—March 15, 1986 through April 20, 1986.

Small Game—November 16, 1985 through March 9, 1986 in all regions.

Archery—October 5, 1985 through November 3, 1985.

Muzzleloading Gun—November 8-10, 1985

Archery/Muzzleloading Gun—February 1-16, 1986 in Northwest Region only.

This action would eliminate the existing confusion which has resulted from staggered opening dates, overlapping seasons and the varying quota hunt periods between the Northwest Region and the other regions.

4. Open that portion of Palm Beach County south of State Road 80 to archery hunting: Presently, archery hunting is permitted in this zone on the wildlife management area and is prohibited on the adjacent tract south of SR 80

5. Allow turkeys to be taken during archery season on wildlife management areas: Presently, turkeys may be taken outside wildlife management areas during archery season but not on wildlife management areas. No impact on turkey populations can be foreseen by this action.

6. Abolish Campbell Lake (Walton County) as a fish management area: This action was requested by the St. Joe Paper Company, the owner, because of long-range development plans for that area.

7. Reduce the gopher tortoise bag limit from five to two, shorten the open season on gopher tortoises from six to three months (October, November and December) and prohibit interstate shipment of gopher tortoises: Continuing population declines necessitate a reduction of harvest. Prohibiting any shipment from the state will minimize commercial use.

8. Change present rule on baiting to the following: Hunting resident game (except turkey and bear) around continuously maintained feeding stations is permitted, provided the station has been maintained for at least six months.

9. Proposed quota hunt changes: Reduce the number of hunt choices on the nine-day and special quota hunt applications from six to four. This action will limit an applicant's choices of hunts to four, thereby eliminating the possibility of a fifth or sixth choice taking a permit that can be used by someone else selecting the same area as one of their four choices.

10. Proposed changes which apply to a specific wildlife management area (WMA):

A. South Region:

(1) Fisheating Creek WMA: Restrict vehicles to designated and numbered trails.

(2) Arbuckle WMA: Establish three weekend archery hunts and two weekend muzzleloading gun hunts with a quota of 150 permits per weekend; establish an annually derived harvest quota for either-sex deer; and include wild hogs as legal to take.

(3) Green Swamp WMA: Reduce wild hog harvest to sustainable levels by allowing wild hogs to be taken only during the archery season and the first 16 days of the general gun hunt.

(4) Upper Hillsborough WMA: Add five weekend spring turkey hunts with a quota of 75 hunters per weekend hunt.

B. Northeast Region:

(1) Nassau WMA: Change that portion south of A1A (SR 200), from dog hunting area to still hunt area and prohibit vehicular traffic south of Alligator Creek (except to allow access to two camping areas) when hunting and scouting is not permitted. An additional campsite in the dog hunt area is also proposed.

Uncontrolled access to portions of Nassau WMA has resulted in unacceptable instances of vandalism to private property and frequent accounts of illegal hunting (with dogs) on adjacent property year-round.

(2) Camp Blanding WMA: Two two-day archery hunts are proposed before the general gun season in the Cantonment area. Following the general gun season, two supervised adult/juvenile gun hunts are proposed. During these two hunts, only juveniles would be permitted to handle firearms.

C. Northwest Region:

Joe Budd WMA: Delete the "stand hour" requirements and prohibit entry from one-half hour before sunrise until one hour after sunrise and from one hour before sunset to one-half hour after sunset on hunting days during the archery and archery/muzzleloading gun hunts.

D. Everglades Region:

(1) Everglades WMA:

(a) Open Conservation Area 2 to a general gun-walk and general gun-vehicle hunt.

(b) Increase the general gun-vehicle season to 16 days.

(c) Allow either-sex deer to be taken on the last weekend of muzzleloading and general gun-walk hunts in Conservation Area 3A North. This proposal would increase the harvest of antlerless deer without adverse impact, and provide greater recreational opportunity.

(2) Holey Land WMA:

(a) Increase the general gun-vehicle season to 16 days.

(b) Allow either-sex deer to be harvested during the last weekend of the general gun-walk hunt. A disproportionate sex ratio (1 to 11.9) heavily favoring antlerless deer exists and the taking of either sex would help adjust the sex ratio.

(c) Allow three-wheeled all-terrain cycles (ATCs) on Holey Land's perimeter road during the archery and muzzleloading seasons. Access to the perimeter road would be permitted only from the L-5 and Miami Canal levees.

(3) Rotenberger WMA:

(a) Increase the length of the general gun-vehicle season to 16 days.

(b) Allow either-sex deer to be legal during the last weekend of muzzleloading gun and general gun-walk hunt under permit only. This proposal would increase the harvest of antlerless deer without adverse impact, and provide greater recreational opportunities.

(4) Corbett WMA: Restrict vehicles to improved and unimproved roads during the archery and muzzleloading gun seasons.

Over the last 10 years, the Corbett WMA area has experienced a 110 percent increase in hunter-days during the archery season and a 60 percent increase during the muzzleloading gun season. Most of the increase has occurred during the last five years. Hunters complain that the excessive offroad vehicle traffic detracts from their hunting experience. Sufficient unimproved roads (existing buggy trails) can be designated for access into traditional hunting areas of Corbett WMA. Unimproved and improved roads will be designated on the hunt map and posted.

(5) Big Cypress WMA:

(a) Only vehicles with four rubber tires of nine-inch minimum width and 60-inch minimum wheel base and airboats shall be permitted off paved or graded roads.

The number of ATCs being used in the Big Cypress WMA for transportation and hunting has increased in recent years, and they now outnumber all other types of vehicles in the area. ATCs allow people to quickly reach remote areas and they provide much easier access to areas previously difficult to reach by traditional means. This proposed change is to reduce the intensity of recreational use, to provide additional assurance that deer and wild hog harvests by hunters are not compromising the perpetuation and conservation of Florida panthers, and to maintain the quality of recreational hunting on the area.

(b) The use of dogs for hunting deer and wild hogs shall be prohibited in all units. Dogs are widely used for hunting deer and wild hogs in the Big Cypress WMA. This will reduce the intensity of harvest pressure being placed on these species which are the primary food base for Florida panthers inhabiting the area, while still providing quality recreational opportunities for deer and wild hog hunting.

E. Central Region: Guana River WMA:

(1) Add two archery hunts (October 19-21 and 26-28, 1985) for antlered deer, wild hogs and small game.

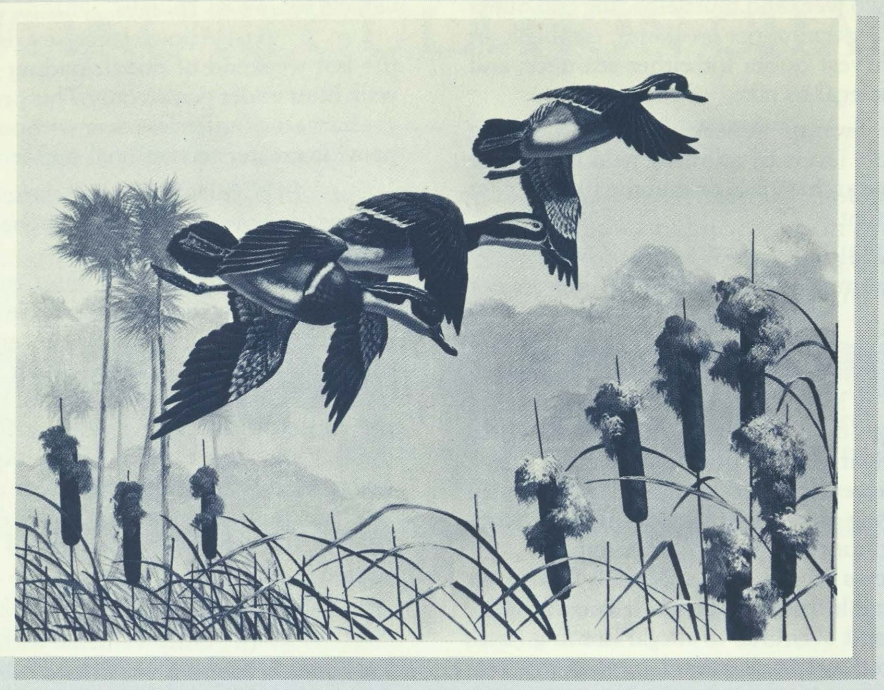
(2) Add two muzzleloading gun hunts (November 2-4 and 9-11, 1985) for antlered deer, wild hogs and small game.

(3) Add two modern gun hunts (November 16-18 and 23-25 1985) for antlered deer, wild hogs and small game.

(4) Add two small game hunts (November 30-December 2, 1985 and December 7-9,1985) for small game only.

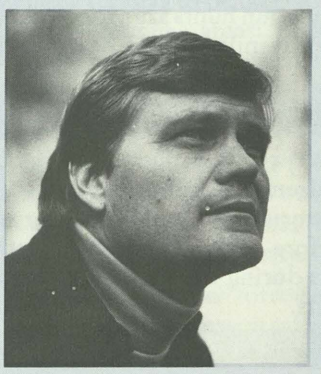
(5) Waterfowl hunting will be permitted by regulations similar to last year's regulations.

11. Apalachicola Wildlife and Environmental Area: Possession of guns is prohibited on the area during closed season for hunting except that unloaded and securely encased or dismantled guns may be transported across the area by boat or vehicle. □



Wood Ducks Flying Over Water

Artist Does It Again



Bob Binks, Artist

Six years ago, artist Bob Binks designed the first Florida Waterfowl Stamp. It featured a pair of green-winged teals. In January, his painting of wood ducks in flight was chosen for the 1985-86 edition of the state duck stamp, making him a winner in Florida for the second time.

An avid hunter, Binks began to draw and paint wildlife he had seen during hunting expeditions in his native Missouri. After he moved to Florida and began a career as an art director, Binks gained national recognition for his talent. In 1981, he was chosen as the Ducks Unlimited Artist of the Year for Florida, and his work was selected for the 1982 South Carolina Waterfowl Hunting and Conservation Stamp.

Now a full-time artist, Binks works out of a studio in his Daytona Beach home. The pond on his five-acre upland property is inundated with wood ducks right now, he said. The ones featured in his painting have taken up residence in wood duck boxes he constructed near the pond. The green-winged teal he painted for the first stamp were also modeled after ones which frequented his pond.

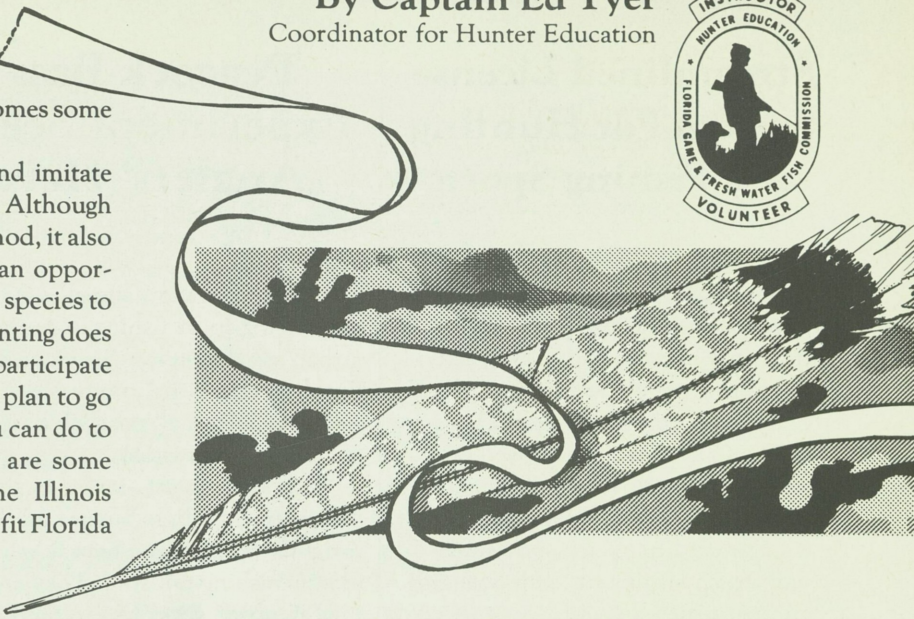
Prints of the 1985-86 duck stamp design will be available through Sport'en Art, RFD 3, Sullivan, IL 61951. Information about costs and the location of art dealers in Florida who will be selling the prints may be obtained by calling toll-free 1-800-382-5723.

Royalties from the sale of these prints will go to the Florida Game and Fresh Water Fish Commission's waterfowl management program.

—Arienne Wallace

Hunter Education News

By Captain Ed Tyer
Coordinator for Hunter Education



Spring turkey season is upon us and with it comes some unique hunting techniques.

Hunters conceal themselves in the woods and imitate turkey sounds to attract gobblers to their blinds. Although this is a challenging and enjoyable hunting method, it also can be very frustrating. A turkey hunter has an opportunity to test his skills, imitating the calls of the species to attract other turkeys. However, this type of hunting does have an element of potential danger if all who participate are not considerate of others in the field. If you plan to go turkey hunting this spring, there are things you can do to help ensure a safe and enjoyable hunt. Here are some suggestions from Donald M. Garver of the Illinois Department of Conservation slightly altered to fit Florida hunting:

1. Don't ever attempt to approach closer than 100 yards to a hen or gobbler.

The "hen" or "gobbler" you hear could possibly be another hunter! He may call so realistically that he sounds even better than a real turkey.

2. Never select a calling site with your back to a tree that is narrower than your shoulders.

Small trees won't hide slight visible movements of your hands or shoulders which may appear to be part of a turkey to any hunter who might be stalking your sweet calls. Use that tree to protect your back where you can't see behind yourself.

3. Never jump or turn suddenly whenever you hear a turkey call behind you.

Wait until the bird walks to where you can see it, or call it back later.

4. Never select a calling site where you can't see at least 40 yards in all directions.

Good manmade turkey calls frequently call in unskilled hunters. It is imperative to clearly identify your target as legal game, before you shoot.

5. Never stalk a turkey.

The idea is to call your gobbler to you. Some of those turkeys you stalk might be anxious hunters using a gobbler call. If you have tried to call a gobbler to you and decide that moving to another calling site might convince him to come, don't. If it's a gobbler, he'll probably see you.

6. Don't use a gobbler call unless it's one of those rare situations where circumstances really warrant trying something different.

When you shake a gobble call, your hand can appear to be a turkey's head. And a gobbler call is guaranteed to attract every hunter who hears it! If you're unsure of how and when to use a gobbler call, don't use it.

7. Don't think that just because you're fully camouflaged that you're totally invisible!

You're plenty visible to both turkeys and hunters when you move even slightly. Sitting perfectly still will attract more turkeys than all the camouflage you can wear.

8. Never wear red, white or blue clothing, not even undergarments of these colors. These colors are unsafe for turkey hunting.

Red is the color many hunters count on to differentiate a gobbler's red wattles from the blue-colored hen's head. White could look like the snowball-colored head of a gobbler, so leave those white handkerchiefs at home. Blue is the principle color of a hen turkey's head, and a few unethical hunters may decide to illegally harvest a hen.

9. Never presume that what you hear or whatever answers you is a turkey.

The better you become at imitating a hen call, the more hunters you will attract.

10. Don't try to hide so well that you can't see what's happening.

You can't kill a turkey you can't see. It's better to select calling sites where you can see for at least 75 yards and have nothing restricting your movements. A gobbler may walk up to within five feet of you in open woods—if you don't move. Gobblers don't like dense, brushy areas where they can't see potential predators.

An additional suggestion to help ensure a safe and uninterrupted hunt is to wrap a piece of blaze-orange plastic tape, barber-pole style around a limb or tree close to your blind. This will alert other hunters that you are in the area. Be sure to remove the tape when you leave and use it during your next hunt.

Whether it's turkey, deer or any other type of hunting, our sport is considered to be very safe. It is through courtesy, cooperation and safety by those who participate that we can continue to have privileges to enjoy our outdoor heritage. ☐

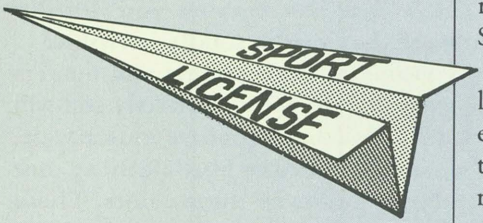
Conservation Scene

Compiled by Trisha Spillan

Streamlined License System For Hunting and Fishing Sports

Sportsmen are one step closer to a streamlined licensing system for the many hunting and fishing activities permitted in the state as a result of action by the Commission.

The Commission approved a change in the current individualized license and permit system to one of a single card on which sportsmen will attach stamps for each licensed and permitted activity.



It's estimated the new license will save $44,000 annually and it will certainly make life a little easier for anglers and hunters.

Also approved by the Commission was a proposal to consolidate the present 36 licenses and permits to only 23. This consolidation is expected to produce a revenue increase of approximately $227,419 per year.

Included in the proposal was elimination of the current annual fishing license valid for July 1 through June 30. Instead, anglers would purchase a license valid for 12 months from the date of purchase.

If approved by the Legislature, the license changes would not take effect until July 1, 1986. □

Peacock Bass Experiment Seeks Anglers' Help

In an experiment aimed at improving sport fishing in certain urban canal systems, the Game and Fresh Water Fish Commission stocked 570 small peacock bass into a Dade County canal.

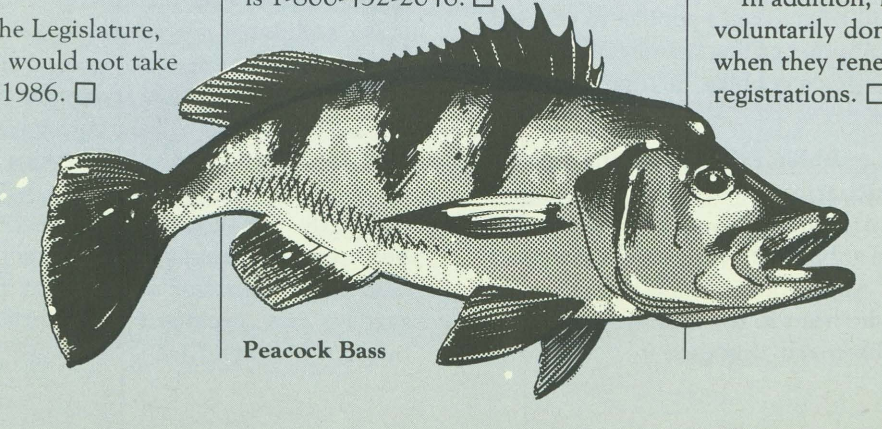
Peacock bass are similar in shape to largemouth bass but are more brightly colored and have a distinguishing tail spot. They are a highly prized sport fish in their native range throughout Central and South America.

Peacock bass readily take artificial lures and commonly reach six to eight pounds or more. It is hoped they will spawn in the canal in the next year and form the nucleus of a viable sport fishery within the next three years.

Peacock bass are unable to live in water colder than 60 degrees and only certain canals in Dade County are known to meet their strict thermal requirements.

It also is hoped the peacock bass will prey on non-native fish such as tilapia, oscar and black arcara which are not enhancing sport fishing. Anyone catching a peacock bass is asked to return it to the water after weighing and measuring the fish.

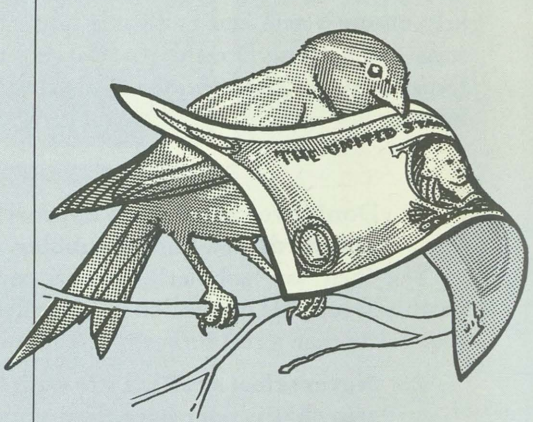
Information on the bass then should be reported to the West Palm Beach office of the Commission. The toll-free number is 1-800-432-2046. □



Peacock Bass

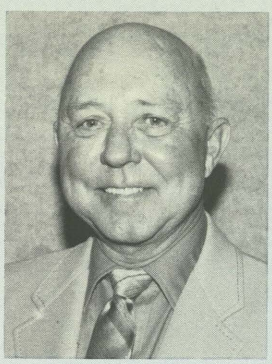
Nongame Wildlife Trust Fund Grows Larger Each Month

During the first month of the new nongame wildlife funding program (October), $120,000 was collected. November receipts were $130,000. The money is to be spent to help conserve nongame wildlife in the face of a growing population of people.



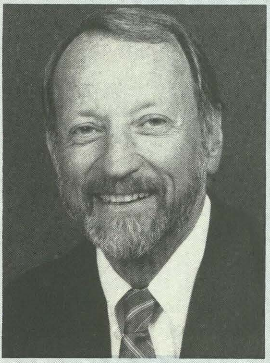
The money comes from vehicle owners when they transfer out-of-state car titles to Florida. They pay a $4 wildlife protection fee under a new state law which took effect October 1, 1984. It is estimated that some 1,000 new residents move to Florida every day. The title transfer money goes directly to the Nongame Wildlife Trust Fund and will be used exclusively for nongame research, conservation and education.

In addition, residents can voluntarily donate to the fund when they renew their vehicle registrations. □



Jim Farrior-Photograph

Thomas L. Hires Sr.



Bill Greer-Photograph

C. Tom Rainey

Hires Selected as 1985 Chairman and Rainey Reappointed by Graham

Thomas L. Hires Sr. of Tampa has been selected as the chairman of the Game and Fresh Water Fish Commission for 1985. Hires was elected to the post during the January 11 Commission meeting in Tampa.

He received the gavel from Dr. C. Tom Rainey of Miami who served as the 1984 chairman. Hires had served as vice-chairman during the same period. Elected as 1985 vice-chairman was Willilam G. Bostick Jr., a trucking executive from Winter Haven.

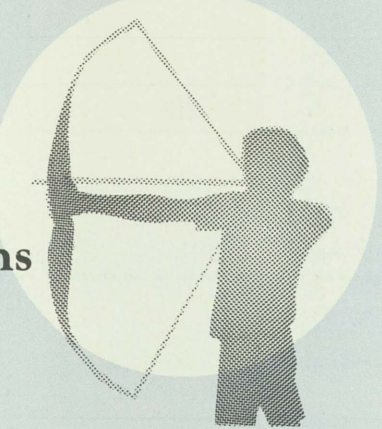
Hires has served on the Commission since 1979 and was recently reappointed to the board by Governor Graham. Bostick has served since 1981. ☐

Governor Bob Graham has reappointed C. Tom Rainey, DVM, to another full term as a member of the Game and Fresh Water Fish Commission.

The Miami veterinarian served as Commission chairman in 1984 and his new term will run until 1990. He was first appointed February 1, 1980.

A native of Ellaville, Georgia, he is a graduate of the University of Georgia and has been practicing in Miami since 1965. He is a past president of the Florida Veterinary Medical Association, active in Ducks Unlimited, Audubon Society, Florida League of Anglers, Florida Wildlife Federation and the Orange Bowl Committee. ☐

The Commission's Summer Camps For Youngsters Is Now Accepting Applications



Summer may seem far away, but now is the time to make plans for your youngsters to attend the Game and Fresh Water Fish Commission's youth conservation camps. The 1985 camping exploration will begin on June 16 and run through August 10. Both the Ocala and the Everglades camps will maintain one-week sessions during this time.

Campers are restricted to a one-week stay, whether participating in the regular, intermediate or advanced programs. The advanced program is open to only those campers who are hunter education certified.

The camps are co-educational and open to youngsters between the ages of eight and 14. They may select either the Ocala camp located on the shores of Lake Eaton in the Ocala National Forest or the Everglades camp at Hungryland Slough in the J.W. Corbett Wildlife Management Area.

Application for the $75-a-week camp may be obtained by writing: Camp Director, Ocala Youth Camp, 1239 Southwest 10th Street, Ocala, FL 32674 or Camp Director, Everglades Youth Camp, 551 North Military Trail, West Palm Beach, FL 33406. ☐

Trisha Spillan

Assistant Editor of FLORIDA WILDLIFE Resigns for New Job

Trisha Spillan, FLORIDA WILDLIFE'S assistant editor for just over five years, resigned March 13 to accept a position as director of communications for the Florida Police Benevolent Association. She worked for the Commission's Office of Informational Services for over ten years.

The magazine staff will miss her very much, and wishes her the very best on her new career venture. Her many contributions to FLORIDA WILDLIFE have been appreciated by many people, both in the Commission and in our readership.

—The Staff ☐

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Florida Game and Fresh Water Fish Commission

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Floridana

In the days of Spanish Florida, there was an Indian chief who was so enormously fat he could not walk or even stand upright, but who managed to outwit the mighty Spanish Conquistador Hernando de Soto.

In May 1539, de Soto landed on Florida's lower Gulf Coast with more than 600 professional soldiers and 200 horses, searching for gold. His army trudged northward over the next few months. When winter began closing in, they set up camp in a large, just-vacated Indian village in Apalachee Province near present-day Tallahassee.

Discovering the Apalachees were hiding nearby, de Soto and his horsemen chased after them, killing and capturing many. But they were unable to overtake the local cacique (chief), Capafi. The chief was so fat he either had to crawl or be carried on a litter.

When de Soto learned Capafi was hiding out in a dense forest, he attacked the hideout. Despite a rain of arrows by the ferocious Apalachees, the armor-clad Spaniards captured Capafi. With the chief's capture, the conquistador thought the Indians would stop tormenting his soldiers. But, every night, to the sounds of war cries, the Indians assaulted the Spanish camp.

Chief Capafi told de Soto if he could meet with his tribe he could get them to stop the harassment. Capafi was carried on a litter to a location where he arranged to meet with his men. During the night, while his Spanish guard slept, Capafi crawled away and was found by his warriors.

At dawn, the Spaniards could not believe their eyes. Somehow, the chief had escaped! The only possible explanation, the soldiers told de Soto, was that the chief had been "spirited away by demons."

Although de Soto pretended to believe them, say historians, he was sorry his men's carelessness had allowed him to be outwitted by a wily Indian chief who could not walk a step.

--Mariam B. Godown

1985